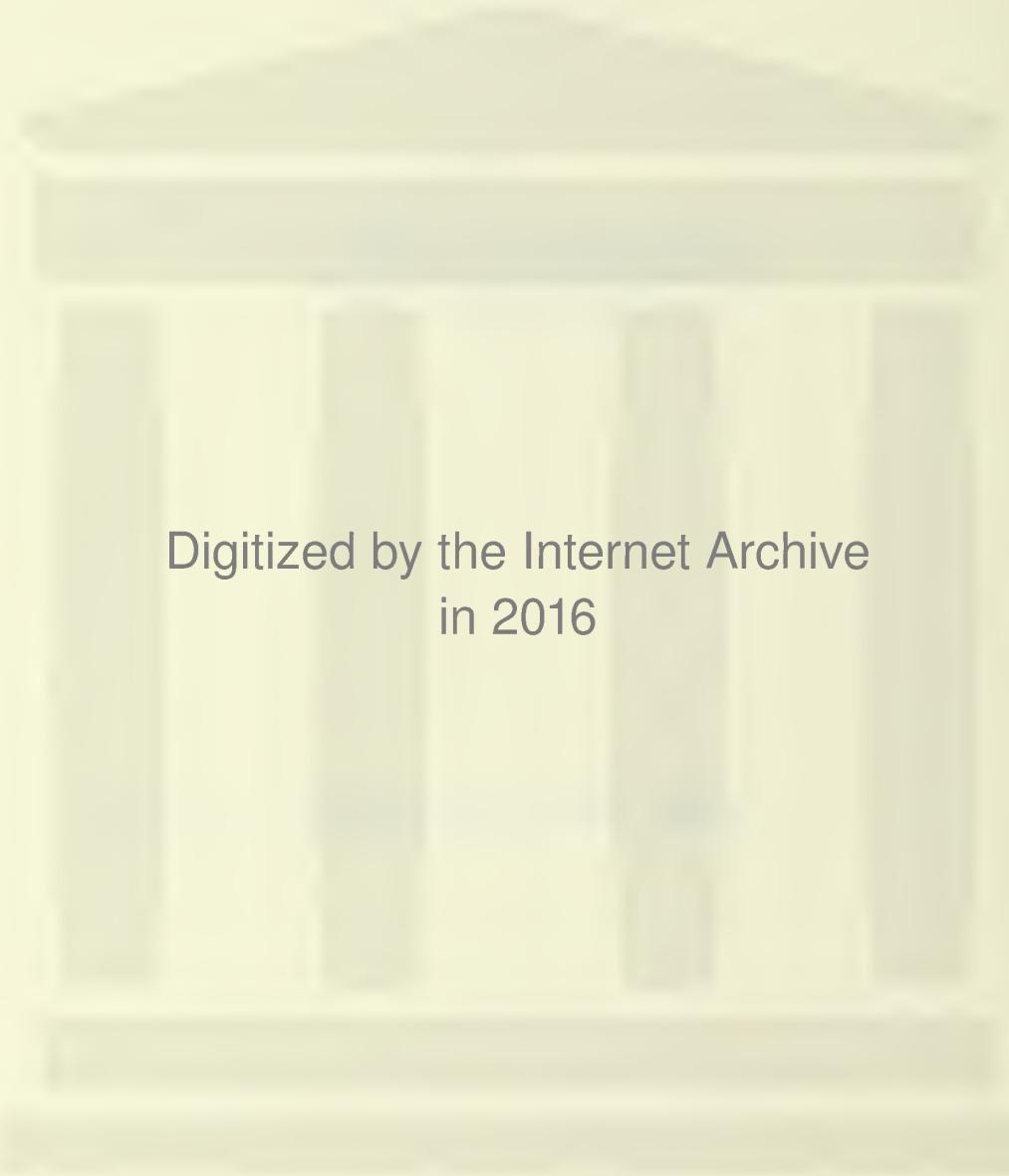


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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 1

June 1996

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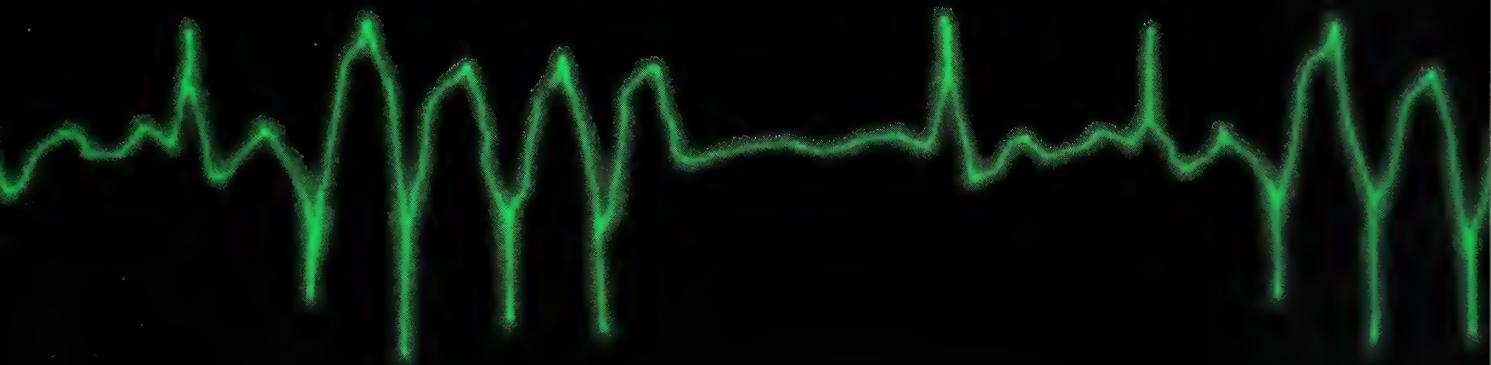
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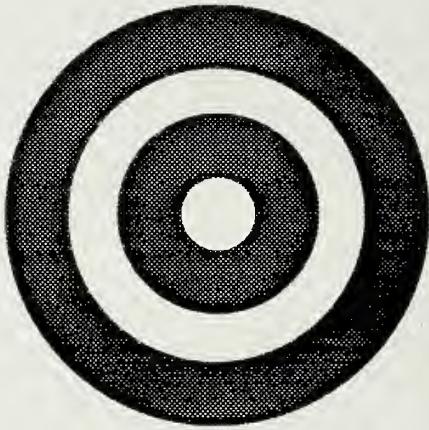
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Managed Care: Global or Local?



Arkansas Managed Care Organization Serves Local Partnerships Providing Community Care.

The world of managed care is expanding, often ignoring the benefits of local partnerships among employers, employees, doctors and hospitals. The global outlook suggests restricted health care delivered *only* by those providers who agree to lower rates in return for guaranteed patients. Arkansas Managed Care Organization (AMCO) believes there is a better way to reduce cost and ensure quality care.

Health Care's Better Way

Formed as a PPO in 1994, AMCO has assembled a strong network of 1,700 local doctors and 38 local hospitals covering 75% of Arkansas. Our philosophy for quality care relies on these stable local partnerships -- run by local boards made up of doctors, hospitals and employers -- to ensure access and affordability. And AMCO can provide coverage to Arkansas' multi-state employers through our national network.

Physician's Practice Where Patients Live

AMCO's local partnerships mean physicians can still practice where patients live, while experiencing practice growth through local employer contracts. The link between managed care and community care combines the benefits of a statewide network with the security and convenience of hometown medical attention.

For information on local partnerships for community care, call AMCO at **1-800-278-8470**.



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Medicine in the News

Health Care Access Foundation

As of May 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 10,942 medically indigent persons, received 20,012 applications and enrolled 39,486 persons. This program has 1,716 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Managed Care News and Information

Medical-malpractice Insurance Rate Increases Due to Managed Care?

According to a recent news article, a Texas medical-malpractice insurer recently sought a 22.9% rate increase citing growing losses from rising misdiagnoses among physicians in HMOs and other managed-care practices.

The article stated that by using primary-care physicians as "gatekeepers" to more expensive specialties, managed care is supposed to cut costs. "If the idea is to treat patients as cheaply as possible and refer as few as possible, there obviously are going to be some patients who should have been referred earlier," an insurance company executive was quoted as saying. "So there's an increased liability for physicians," he added.

The medical-malpractice insurer argued in its rate request that "gatekeepers" are costing it money and are a major factor behind its need to raise malpractice rates. A company executive indicated that they are not attributing the rate increase entirely to that trend but that they have identified increased losses due to misdiagnoses. He also said that managed care puts greater responsibility on primary-care physicians to do more.

In the article, a lobbyist for the Texas Medical Association was quoted as saying, "You're going from one extreme, where there was perhaps too much care and too much defensive medicine, to a point where there may not be enough care and not enough defensive medicine. It's a difficult balance."

Although the 22.9% rate increase request was rejected by the Texas Department of Insurance, it signals a warning that should be watched closely in the future.

Gatekeeper Liability: Ten Topics of Concern

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The ever-increasing penetration of managed care throughout the United States has given rise to new and evolving concerns for physicians acting as "gatekeepers."

"Gatekeepers" are primary care physicians who serve as the patient's initial contact, and are then responsible for providing care as appropriate, and coordinating any needed consultations or referrals.

"Primary care physicians as gatekeepers are doing less primary care and more coordination of care and administrative work," noted Paul R. Frisch, J.D., C.A.E., director, Medical-Legal Affairs, Oregon Medical Association. "That coordination, as well as other gatekeeper responsibilities, raise a number of highly interesting legal and ethical issues for gatekeepers," Frisch said. "I'm neither an advocate nor a detractor of the managed care concept," he added. "But from the physician's perspective, it can at times feel like the ground is shifting beneath you in the managed care environment."

Ten legal and ethical concerns for gatekeepers, with commentary on each from Frisch, are:

1.) *Joint responsibility as manager of care AND steward of resources allotted for care.*

"How does the primary care physician wear both hats? This is less of a liability concern - though it can develop into one - than an issue related to the professional role and performance of doctors. It also hinges on expectations. The expectations a managed care plan has of the gatekeeper might not be in line with the expectations of the patient. The patient, in fact, is probably unaware of any expectations other than that the gatekeeper will be his or her advocate. The patient may not even know the physician is serving as a gatekeeper.

"In a fee-for-service arrangement, the physician's concerns were more focused on individual patients. Today, the gatekeeper's concerns extend to an entire population of patients, with a finite amount of dollars to fund the care they receive. This can cause some tension for physicians who tend to identify more with individual care decisions."

2.) *Liability exposure related to "wellness" issues.*

"The managed care emphasis on wellness raises liability issues for the gatekeeper. The physician can in a sense get caught up in the advertising and promotional efforts of the managed care group. The advertising might not only tout access to the 'physician of your choice,' but all kinds of wellness services to keep you healthy. Look at the debate over mammograms. When is one appropriate? Individual doctors, the government and managed care firms may all have different answers. If the plan offers mammograms as a benefit of its 'wellness program,'

failure to provide one poses a liability risk. If the test is read by someone who is not as qualified as the person who would read it under a fee-for-service arrangement, that might pose a liability risk. If we don't practice 'wellness medicine' or don't do it right, it can create a liability exposure for the gatekeeper above and beyond the standard of care issues, because these benefits were advertised and promoted very specifically by the plan."

3.) *Limitations on use of clinical resources.*

"The local standard of care and the plan benefits don't have to be the same, and frequently they are not. If the plan does not pay for certain tests or procedures or prefers one over another, that may be at odds with the local standard of care. Groups of physicians may say it is the standard of care in this community to treat a given condition with a certain test or procedure. But if the managed care plan does not provide payment for that course of action, the physician is caught between doing what the contract allows and what the standard of care in the community might be. And if the physician provides care that differs from the plan benefits, it may at a minimum expose the physician to criticism regarding costs."

4.) *Financial incentives to reduce cost of care.*

"There are three financial incentives under managed care designed to encourage physicians to reduce costs: bonuses, risk pools/withholds and penalties. It's important to note these incentives are not meant to encourage doctors to provide 'less care.' But some of the contract wording can be inflammatory.

"The appeal can be great: 'Doctor, we can pay you money over and above what you would earn in a fee-for-service arrangement if you are mindful of cost concerns. The American Medical Association's policies encourage organizations that use bonuses, risk pools and penalties to view the patient population as a whole and not to design systems that penalize both patients and gatekeepers for individual patient care decisions.'

5.) *Financial penalty for exceeding quotas.*

"Managed care plans instruct gatekeepers to 'Plan not to do more than X number of tests or procedures of a given type. Don't be an overutilizer.' These numbers or quotas might be based on some ideal of what the average physician in the community is doing.

"The pressure to conform might be from your peers. They might question why you ordered that test or prescribed that drug. If you are thinking about the cost of care for an entire population of patients based on a specific budget for that care and penalties for exceeding that budget, you're going to be more conscious about using more expensive drugs or procedures. But

the gatekeeper always must be mindful of making medical care decisions, not solely financial decisions."

6.) *Business responsibilities to/interactions with non-physicians.*

"The bean counter meets the physician. What is the gatekeeper to think when someone without the same kind of clinical and professional interests and background is evaluating him or her and making recommendations? Aside from the issues related to personal interaction, the gatekeeper has to consider whether his interests and the interest of the patient are at odds in any way with these contractual reviews, which are more focused on dollars and cents than clinical outcomes."

7.) *Non-physician access to confidential patient information.*

"Does the patient who enrolls in a given health plan know that the plan reserves the right to review patient records... and does so frequently?

"The hallmark of the physician-patient relationship is trust. Information relevant to the patient's health should be discussed freely between the gatekeeper and the patient and placed in the medical record. It's not always in the patient's best interest if this information is made known to others, especially non-physicians. There is no adequate way to audit patient records without some patient identifier being included. Some managed care plans want to assess the physician's performance and interaction with patients. And they ask to review patient records to do that. It's clearly inappropriate, but it's done all the time."

8.) *Restrictions on referrals, or profile-based referrals.*

"The profile-based referral focuses the gatekeeper's attention on specialists whose charges fall within the acceptable cost parameters of the managed care group or their own individual practice association (IPA). Or the restriction on referrals may be based on an approved panel of specialists. If your dollars are on the line as a gatekeeper participating in the financial risk of care there may be a tendency to refer to those specialists who are most cost-conscious. But the liability risk for the gatekeeper is that he or she is making that referral based on his or her financial benefit, instead of in the best interest of the patient.

"Also, if the approved panel of specialists available for referral is too restricted, the gatekeeper could be held vicariously liable for the care provided by that specialist, because the patient's choice of a specialist provider was so unduly limited."

9.) *Contractual assumption of financial and medical liability risk.*

"The key to the contractual assumption of financial risk is that most plans do not allow physicians to balance-bill patients. Patients might be responsible for

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50	\$1,185	\$1,460	\$1,910
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60	\$2,760	\$3,560	\$4,460
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a co-payment or a deductible, but they cannot be billed for costs over and above what the plan pays the physician for care. In a worst case scenario, the plan may deny payment altogether, and the physician is contractually barred from attempting to recoup any of his or her costs.

"The other piece of this risk puzzle is the medical liability risk. Let's suppose a patient has a certain medical condition that falls under the plan's utilization review policy. The patient could probably benefit from a course of treatment not covered by the plan. The physician explains the pros and cons of both treatment options and the patient chooses the option covered by the plan. The patient suffers an adverse result.

While the issue is currently the subject of spirited debate, managed care entities today may be held harmless from any liability in this type of lawsuit because of the ERISA (Employee Retirement Income Security Act) statute. Physicians are sometimes amazed when they learn this. They ask me, 'You mean the managed care plan is not responsible for its actions?' And I have to tell them 'No, doctor, you are.'

10.) "Gag" provisions.

"Most physicians and patients would agree that physicians must adhere to an ethical and professional standard of care that says they must be an advocate for the patient's best interests. If that is the case, then a gatekeeper must be assertive about issues he or she has with managed care plan policies. The gatekeeper should fight for the patient, use the mechanisms available to him or her to pursue change in the plan and above all, tell the patient about these concerns.

"But, if you happen to be an attorney for the managed care plan, it might make a great deal of sense to try to limit what the gatekeeper can say about the plan. The attorney might not see this as a First Amendment issue, but as a common sense business issue. Their view is, 'Thou shalt not cast the plan in a bad light.'

"So, what are known as 'gag' provisions have sprung up in managed care contracts with physicians. They prevent the physician from communicating to the patient negative views about the plan, its policies

Top Ten Allegations by Frequency

1994 Rank	1995 Rank	Allegation	Number of Claims	Average Cost
1	1	Surgery/Postoperative Complications	1,019	\$ 73,300
2	2	Failure to Diagnose/Cancer	441	\$123,100
3	3	Surgery/Inadvertent Act	362	\$ 91,000
4	4	Improper Treatment/Birth-Related	346	\$132,800
5	5	Failure to Diagnose/Fracture-Dislocation	205	\$ 55,600
6	6	Improper Treatment/Drug Side Effect	194	\$ 72,700
7	7	Failure to Diagnose/Abdominal Problems	174	\$ 71,300
***	8	Failure to Diagnose/Circulatory Problems	168	\$111,000
8	9	Improper Treatment/Infection	164	\$ 63,100
***	10	Failure to Diagnose/Infection	161	\$144,300

***Did not appear in 1994 Allegations Review.

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and structure. To the lawyer, it doesn't matter that the physician has an ethical duty to the patient. The lawyer's job is to keep the patients enrolled and to maintain the image of the plan. 'Gag' provisions, no matter how horrendous they may seem to the gatekeeper, help do that. But they clearly put the gatekeeper in an ethical bind."

AMA Calls for Divestment of all Tobacco Stocks and Mutual Funds

Physicians group publishes list of 13 stocks and 1,474 mutual funds to avoid.

The AMA recently called on investors to divest of 13 stocks and 1,474 mutual funds that manufacture tobacco or invest in tobacco companies calling tobacco a "ruinous and enslaving product that has brought misery, disease, anguish and death."

The 13 stocks are publicly traded companies that manufacture and distribute tobacco products. The 1,474 mutual funds singled out by the AMA reported holdings of tobacco stocks or bonds, according to independent research conducted for the AMA.

Physician Recommendations

"All physicians, health professionals, public health advocates, medical institutions, hospitals and all people interested in the health and welfare of our children should review their investments and divest of tobacco," said Randolph Smoak, Jr., M.D., secretary-treasurer of the AMA and a South Carolinian surgeon.

Specifically the AMA recommended:

- 1.) All institutions and individuals review their assets and divest of any shares in the listed stocks and funds,

2.) and/or inform their mutual fund managers that tobacco holdings should be sold and are not acceptable investments.

The physician organization plans to update and publish the list annually in its publications. In addition, the AMA has written to all 7,000 mutual funds traded in the U.S. asking them to join a "Coalition of Tobacco-Free Investments" by pledging not to invest in tobacco in the future.

Research conducted independently

The list was compiled by the Investor Responsibility Research Group (IRRC) a not-for-profit, independent research firm, based in Washington, D.C., that has tracked tobacco and public health issues. IRRC identified mutual funds with investments in tobacco based on analysis of Morningstar Inc., data. Morningstar surveys mutual funds about their equity and debt holdings, and periodically analyzes N-SAR (semi-annual report) forms that mutual funds must file under U.S. Securities law.

"How can we allow any of our hard-earned money to support any portion of the tobacco industry?" asked Smoak. "When tobacco is no longer profitable, when children no longer are exposed or succumb to cartoon tobacco enticements and when this country's investors refuse to take dividends from an industry whose product causes suffering and addiction, then these

AMS Council Take Action Regarding Divestment of Tobacco Related Stocks, Bonds & Funds

During the Annual Session Council meetings May 2-4, Dr. William Jones discussed the AMA's recent announcement concerning the divestment of all tobacco related stocks, bonds and mutual funds. Upon motion, the Council voted for the Budget Committee to undertake a comprehensive study of investment portfolios of the Arkansas Medical Society, the AMS Pension Plan, and MEFFA to determine every instance where AMS monies are invested in tobacco companies, their subsidiaries, and/or mutual funds holding tobacco stocks and bonds. A report will be made to the Council at its next meeting at which time consideration will be given to the divestment of all tobacco related stocks, bonds and mutual funds.

American companies will join the realm of responsible corporate citizens."

The AMA also renewed its support for the proposed FDA regulations on tobacco and called on the industry "to accept the FDA regulations in their entirety and follow these regulations in spirit and in law" to solve their current image, legal and regulatory problems.

Past Divestments

AMA's call for divestment of tobacco stocks in mutual funds follows its decision in 1986 to divest tobacco stocks in AMA's portfolio. Other public health organizations divesting during the 1980s include the American Heart Association, American Lung Association and American Cancer Society. Since 1990, several leading universities with medical schools have responded to AMA's call for divestment of tobacco holdings including Harvard, Johns Hopkins, Wayne State and City University of New York.

A complete listing of the 13 stocks and the 1,474 mutual funds

with tobacco holdings is available by calling AMA at 202-789-7447. Dr. Smoak's remarks and the AMA/IRRC report listing of the 1,474 mutual funds with tobacco holdings are available on the AMA's Homepage at <http://www.ama-assn.org> in the What's New Section.
- *Information provided by the AMA FED-NET, April 24, 1996.*

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AMS Newsmakers



Chancery Judge John Norman Harkey (right) shakes hands with Dr. J.R. Baker after swearing him in for an 8-year term on the Arkansas State Medical Board.

Dr. J.R. Baker, a family practice physician in Batesville, was recently appointed to an eight-year term on the Arkansas State Medical Board by Gov. Jim Guy Tucker.



K. Scott Malone, M.D.

Dr. K. Scott Malone, who is completing his residency in physical medicine and rehabilitation at UAMS this month, was recently awarded an AMA Policy Promotion Grant for the Greater Friendship, Inc., Lighthouse Project. The \$500 grant will be used to provide educational materials for drug and alcohol abuse programs, AIDS Awareness Training, teen pregnancy counseling and community health fairs with the target population being the Granite Mountain community of the City of Little Rock, home of the Lighthouse Project's base operations. With the help of the AMA and AMS, Dr. Malone has participated as a Glaxo-Wellcome Health Policy Scholar and State Delegate to the Resident Physician Section of the AMA. He will continue his training in Birmingham, Alabama, as a fellow at the American Sports Medicine Institute.



James E. McDonald, M.D.

Dr. James E. McDonald, II, an ophthalmologist in Fayetteville, was recently elected for a one-year term to the board of directors of the American College of Eye Surgeons.



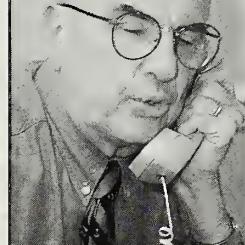
Lawrence Schemel, M.D.

Dr. Lawrence Schemel, a family practitioner in Springdale, was recently certified by the Federal Aviation Administration to perform flight physicals for second- and third-class medical certificates and student pilot certificates.



Carl L. Williams, M.D.

Dr. Carl L. Williams, a cardiovascular surgeon in Fort Smith, recently attended the 9th International Congress of Endovascular Interventions sponsored by the Arizona Heart Institute in Scottsdale.



Carl L. Williams, M.D.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of April 1996 are: Paul John Baxley, Benton; Thomas Henry Benton, Salem; Sandra D. Bruce-Nichols, Little Rock; Carlton Lee Chambers, Harrison; Bernard Louis Fioravanti, Rogers; Noland Harrison Hagood, Arkadelphia; Paula Marie Lynch, Little Rock; David Henderson Mosley, Camden; Nick J. Paslidis, Little Rock; Bharathi Rangaswami, Helena; Roland Reynolds, Newport; David R. Tapley, Hot Springs National Park; William Perry Welch, Harrison; and Phillip Lee White, Murfreesboro.

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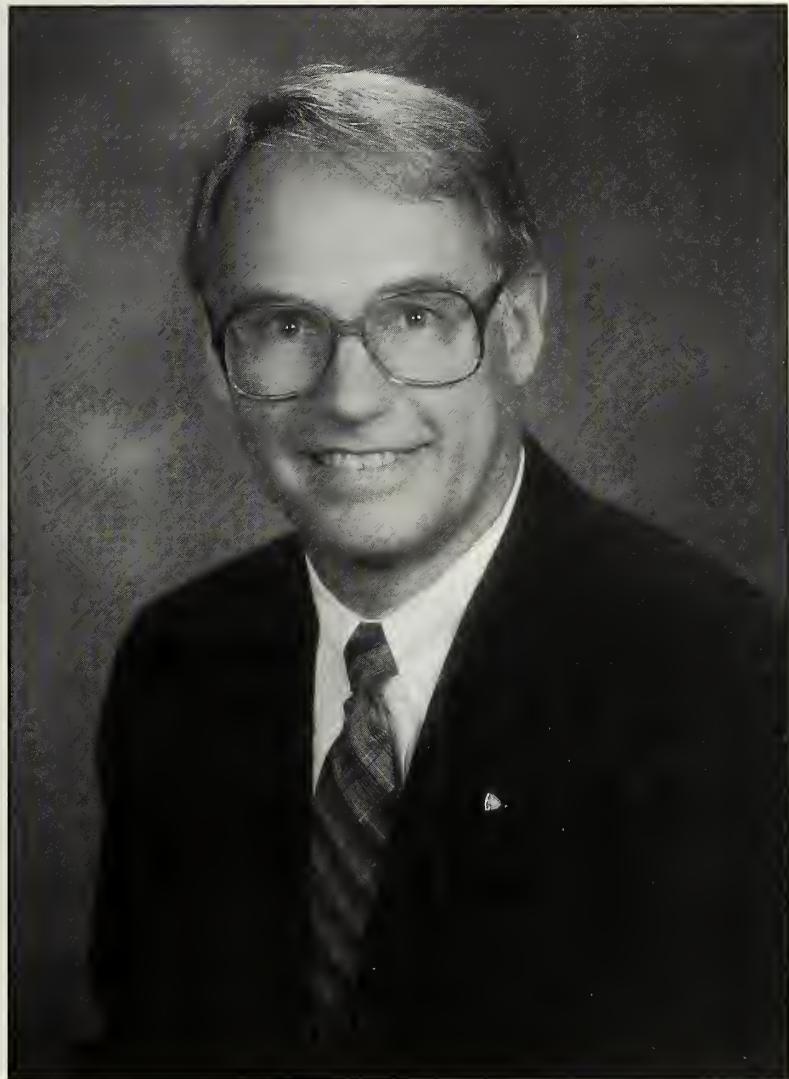
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John Crenshaw, M.D.

*1996-1997 President
Arkansas Medical Society
Pine Bluff, Arkansas*

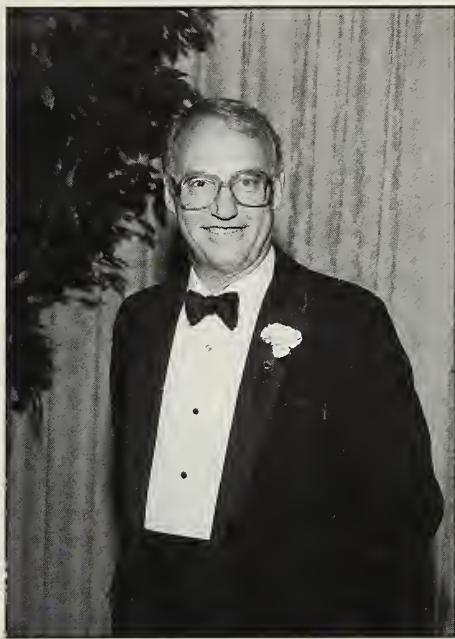
Dr. Crenshaw takes his oath of office with Dr. Armstrong at his side.



Dr. Crenshaw and his wife Donna with Dr. Armstrong and his wife Judy and Dr. Kolb and his wife Patricia.

AMS Past Presidents congratulate Dr. Crenshaw.





Inaugural Address

John Crenshaw, M.D.
President 1996-1997

Dr. Armstrong, fellow physicians, Alliance members, and guests, I am overwhelmed by this honor bestowed on me. I appreciate our prior leadership which join me at the podium and am excited to add my name to this elite group!

As most of you know, I practice internal medicine in Pine Bluff. My earliest roots are in rural Tennessee, and my formal training was in Memphis prior to adopting and being adopted by the Razorbacks. I have great admiration for the American way, which permits an individual physician, such as myself, to develop the mode of medical practice and lifestyle tailored to my personal preferences. Still I have the privilege and opportunity of influencing the practice and reputation of our profession. I believe the greatest honor is to be recognized by one's peers.

Age and maturity aid in appreciating traditions. I intend to follow the tradition of a short inaugural speech, highlighting current medical problems. The title of this 120th annual session is "Mastering Medicine's Challenges."

Managed Care - Unquestionably the greatest threat to medicine, as most of us are trained to treat patients. Physicians struggle daily, attempting to adapt to the changing environment of managed care. And we all remember from our early training and rotation through pediatrics: *The only persons who welcome change are wet babies.* It is human nature to resist change and to cling to the familiar - our comfort zones. The "Management of Care" would be a more suitable name, for its synonyms

include rationing, capitation, gate keeping, and risk sharing. These are confusing concepts; legalese complicated by changing rules and regulations. The ostrich approach will not do. Managed Care is here to stay. Oh there will be evolution, redefinition, and new names, but my friends and colleagues, a rose is a rose is a rose. Instead of the government leading us to unfamiliar, shaky grounds, the medical profession should lead the government in developing that elusive level playing field where physicians can engage in fair competition for the right to manage the management of our patients' care.

When Lonnie Bristow addressed the House of Delegates yesterday, he used the analogy of the medical profession, trying to steer the government in its attempts to control our practice of medicine. He used the comparison with the bobsled and even we southern arch conservatives realize there are no effective breaks on bobsleds.

Medicare began in 1965 as I completed residency. Fear gripped our hearts as we anticipated the dreaded dragon of socialized medicine, whose unwelcome arrival would take less than a decade. My training was to care for sick persons. This task alone is a full-time job. Additionally, we have encountered vice-like pressure to over-utilize cost effectiveness and to under-utilize advanced technology. Unfortunately we now need to understand outliers, adverse selection, and complex underwriting regulations as thoroughly as an insurance executive does. Consequently, these over-

bearing restrictions influence the practice of medicine, and they have an impact on the economics of our lifestyle.

In 1992, the Council of the Arkansas Medical Society established the Arkansas Managed Care Organization (AMCO) as a statewide PPO. Obviously, this venture has served its purpose well with 1,850 physician providers. Today, some of our members feel we should "move to the next level" and establish an HMO. I strongly believe the Arkansas Medical Society is an association of physicians. Therefore, we should remain separate from any managed care organization. The AMS represents all the physicians in Arkansas and should not align with any specific group or program in competition with another. My desire is that AMCO will continue to thrive in the arena of managed care. I strongly support the decision made yesterday by the Council and the House of Delegates for the AMS to disassociate from AMCO. Hopefully, this separation will not create polarization or ill will from its constituents. I consider this my superlative summons this year as your President.

A second challenge, vague to define, yet insidious, is apathy. Quoting Pogo, "*We have met the enemy, and he is us!*" There are approximately 7,500 licensed physicians in Arkansas and 4,500 practicing physicians. Last year, we had only 3% or 150 physicians attend this session. Tonight, millions are attending. Jerry Mann, as Annual Session Chairman, the AMS staff, and I have departed from tradition, attempting to encourage more participation. Tonight represents the first time in which the President's Reception has occurred before the election. I hope the House of Delegates elect me to this office tomorrow morning as scheduled. Otherwise, I feel no obligation to pay for the dinners of my friends and family as promised!

We have all been reminded of the ancient tradition of torch bearers as preparation for the Olympic Games has begun. We must work hard to involve more young physicians in this organization by empowering and entrusting to them positions of responsibility that provide leadership development. We are their torch bearers! The Young Physicians Organization is effective and deserves our immutable support. The OSMAP meeting (a.k.a. President's Club) is patterned after the AMA, serving as a vehicle for county society presidents and specialty presidents to meet, discuss, and influence the progress of our organization.

My life was molded in an effective Christian home where the values of contributing both financially and personally to God through the church were demon-

strated. Similarly, I believe physicians educated primarily with state funds inherit an obligation to contribute their time, talent, and energy to the betterment of our profession. The Hippocratic Oath states: "I will follow that system of regime which, according to my ability and judgment, I consider for the benefit of my patients and abstain from whatever is deleterious or mischievous." My interpretation of this doctrine causes me to believe that friction and factions within the medical community - local, state and national - indicate a malignancy of the practice of medicine. Looking forward toward the rapidly approaching 21st century and its unimaginable challenges, this malignancy will prove to be life threatening. It is imperative that we bond together and unify our efforts and, yet, respect the diversity of opinions. To quote Martin Luther King, "*We must all learn to live together as brothers or we will perish as fools.*" The Crenshaw paraphrase states, "*We must all stick together or we will hang separately!*" This remains the only practical strategy for defeating the "divide and conquer" tactics in which we are embroiled.

Remember the theme of this session - "Mastering Medicine's Challenges." I have attempted to overview the most pressing challenges from my perspective. Patients demand and deserve quality health care that is affordable and accessible. We are obligated to meet these expectations and demands despite accompanying harsh, political, and fiscal restraints. These troublesome twins dictate our practice of medicine while casting a pall upon our daily living. We must adopt the Chinese symbol for change if we expect to survive this oppression. Two characters from the Chinese language are combined - the character for danger and the character for opportunity. Translated, it signifies change. It is incumbent upon us to envision opportunity combined with these potentially dangerous changes.

While we may not endorse each action of the AMA, I advocate pledging a unified support to the national leaders who are attempting reorganization to more effectively shape the policies of organized medicine. I admonish you to continue your participation in this society and other grass roots organizations. I charge you to encourage your fellow physicians to become more involved in our society for the accomplishment of the mission and the vision. As your President, acutely aware of my imperfections, I humbly and gratefully accept this position as President of the Arkansas Medical Society. I offer to you my pledge to execute the responsibilities entrusted to me with courage, character, and commitment during my reigning year.

AMS President Profile



Dr. Crenshaw with his wife Donna



Dr. Crenshaw with family members.

John Crenshaw, M.D.

Dr. Crenshaw, a physician of internal medicine, has been in private practice at Medical Associates, P.A., in Pine Bluff since 1979. From 1967 to 1978, he was with The Doctors Clinic, P.A., in Pine Bluff. In 1961, Dr. Crenshaw graduated from the University of Tennessee College of Medicine at Memphis. He then completed a year-long rotating internship with the City of Memphis Hospital and a three-year internal medicine residency with the Veterans Administration Hospital in Memphis. From 1965 to 1967, he was Captain of the Army Medical Corps in Ft. Leonard Wood, Missouri.

For the past twenty-nine years, Dr. Crenshaw has been affiliated with Jefferson Regional Medical Center where he is currently a Board of Directors member and previously served as Chief of Staff and Chairman of multiple committees.

He is a member of the American Medical Association and the American College of Physicians. He is a past president of the Jefferson County Medical Society and the Arkansas Society of Internal Medicine (ASIM). In addition, he is a past chairman of ASIM's Medical Liability Committee and member of the Society's Laboratory Committee. With the Arkansas Medical Society, Dr. Crenshaw served as president-elect in 1995-96, speaker of the house and on various committee chairmanships.

Dr. Crenshaw is a member of First United Methodist Church, where he has served as chairman of the Administrative Board, Trustees and Finance Committee. He is a member of the Trinity Village Board of Directors and a previous Board of Directors member for the Chamber of Commerce and United Way.

Dr. Crenshaw and his wife, Donna, have two grown children (a son and a daughter) and three grandchildren.

1996 Convention Keynote Speakers

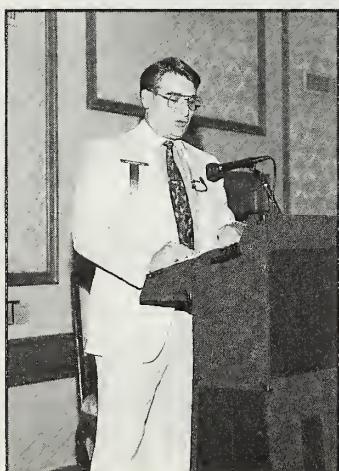


Keynote Address

Lonnie R. Bristow, M.D., President of the American Medical Association, gave the keynote address at the House of Delegates meeting on Thursday, May 2. He has been a member of the AMA Board of Trustees since 1985. Before his election to the Board, he served as a delegate to the AMA from the American Society of Internal Medicine. Bristow is a diplomate of the American Board of Internal Medicine and a master of the American College of Physicians.

Shuffield Lecture

Joel Blackwell of the Issue Management Company in Cornelius, N.C., was the featured speaker at the Shuffield Luncheon on Friday, May 3. His talk was titled "Personal Political Power." Blackwell has worked as a consultant and trainer for associations since 1985. His presentation showed how to develop positive attitudes and enthusiasm for lobbying, politics and PACs; build long term relationships with elected officials; and deliver a concise, personal version of the association's message on issues.



1st Feature Session

The Honorable Bill Kennemer and **Renee Paper, R.N., C.C.R.N.**, spoke during the First Feature Session about "A Patient's Right to Know...Curbing the Abuses of Managed Care." Kennemer, sponsor of the Patient Protection/Full disclosure Act, was elected to the Oregon State Senate in 1987. He has a private practice in Clinical Psychology.

Paper, Program Director for the Hemophilia Foundation of Nevada, is the Founding Board Member of the Citizens for the Right to Know Coalition.

1996 Convention Keynote Speakers



2nd Feature Session

Joseph M. Beck II, M.D., Sandra B. Nichols, M.D., and William W. Stead, M.D., spoke during the Second Feature Session about "Infectious Diseases: An Arkansas Focus." Beck, an oncologist in private practice in Little Rock, is Chairman of the AMS Task Force on AIDS. He also serves as Chairman of the St. Vincent Infirmary - Bloodborne Disease Committee and is a member of the Arkansas Department of Health AIDS Advisory Committee.

Nichols has been the Director of the Arkansas Department of Health since 1994. She is an Officer of the Department of Health and Human Services, Food and Drug Administration and is on Gov. Jim Guy Tucker's Task Force on Health Care Reform.

Stead, Director of the Tuberculosis Program at the Arkansas Department of Health, has served as a consultant for TB control in prisons in Minnesota and New Jersey. He was a member of the Advisory Council for Elimination of TB for the Centers for Disease Control from 1987-1991.

3rd Feature Session

Russell D. Harrington, Jr., President of Baptist Health in Little Rock, and **Ellen A. Pryga**, Director of the Division of Policy Development at the American Hospital Association in Washington, D.C., spoke during the Third Feature Session about "Managed Care: Confronting and Dealing With the New Realities."

Harrington is a Fellow in the American College of Healthcare Executives and is a past chairman of the Arkansas Hospital Association. He serves on Gov. Tucker's Task Force on Health Care Reform and is a member of the Health Services Commission.

Pryga has worked for the American Hospital Association for more than 25 years. Currently, her work is focused on health care reform and the changing role of hospitals as they evolve into community-based health care delivery systems.



1996 Arkansas Medical Society Annual Session

	Officers	First Session	Second Session
Speaker	Anna Redman	present	present
Vice Speaker	Kevin Beavers	present	-
President	James Armstrong	present	present
President-elect	John Crenshaw	present	present
Vice President	Joe V. Jones	present	present
Secretary	Mike Moody	present	present
Treasurer	Lloyd Langston	present	-
Councilors			
District 1:	Joe Stallings	present	-
	Dwight Williams	present	-
District 2:	Lloyd Bess	-	present
	Daniel Davidson	present	present
District 3:	Hoy B. Speer, Jr.	present	present
	P. Vasudevan	present	present
District 4:	John O. Lytle	present	-
	Paul Wallick	present	present
District 5:	Wayne Elliott	present	-
	Robert Nunnally	present	-
District 6:	George Finley	present	present
	Michael Young	-	-
District 7:	Robert McCrary	-	present
	Brenda Powell	present	present
District 8:	David Barclay	-	-
	Joseph Beck	-	-
	Paul Cornell	present	present
	Anthony Johnson	present	present
	William Jones	present	present
	Charles Logan	present	present
	Jerry Mann	present	present
	J. Mayne Parker	present	present
	John L. Wilson	-	-
District 9:	David Davis	-	-
	Robert Langston	present	present

District 10:	William McGowan	-	present
	Gerald Stoltz	present	present
	Paul Wills	-	-
	Morton Wilson	present	present
Past Presidents			
1979-1980	A. E. Andrews	present	-
1971-1972	C. Stanley Applegate	-	-
1993-1994	Glen F. Baker	present	-
1985-1986	John P. Burge	present	present
1983-1984	Asa A. Crow	present	-
1964-1965	C. Randolph Ellis	present	-
1869-1970	Ross E. Fowler	-	-
1951-1952	Charles R. Henry	-	-
1982-1983	Morriss M. Henry	present	-
1988-1989	John M. Hestir	present	present
1990-1991	William N. Jones	present	-
1987-1988	W. Ray Jouett	-	present
1976-1977	Albert S. Koenig	-	-
1994-1995	James M. Kolb, Jr.	present	present
1977-1978	Payton Kolb	present	-
1980-1981	Kemal E. Kutait	-	-
1992-1993	J. Larry Lawson	-	present
1986-1987	Ken Lilly	-	-
Honorary	C. C. Long	-	-
1967-1968	Joseph Norton	-	-
1974-1975	Ben Saltzman	-	-
1981-1982	Purcell Smith	-	-
1968-1969	H. W. Thomas	present	-
1975-1976	T. E. Townsend	-	-
1991-1992	George Warren	present	-
1989-1990	James Weber	-	-
1984-1985	Charles Wilkins	-	-
1973-1974	John Wood	-	-
1978-1979	George Wynne	-	-

House of Delegates Composition

County	Delegates	First Session	Second Session
Arkansas (1)	NOT REPRESENTED		
Ashley (1)	NOT REPRESENTED		
Baxter (2)	John Guenthner	present	present
	Robert Baker	present	present
Benton (4)	NOT REPRESENTED		
Boone (1)	Jim Crider	present	present
Bradley (1)	NOT REPRESENTED		
Carroll (1)	Oliver Wallace	present	present
Chicot (1)	NOT REPRESENTED		
Clark (1)	NOT REPRESENTED		
Cleburne (1)	Jerry Thomas	present	-
Columbia (1)	NOT REPRESENTED		
Conway (1)	NOT REPRESENTED		

Craighead /Poinsett (7)	James Basinger	-	-
	Tim Dow	present	present
	Joe Stallings	-	present
	Ken Tidwell	present	-
	Don Vollman	present	present
Crawford (1)	NOT REPRESENTED		
Crittenden (2)	G. Edward Bryant	present	-
Cross (1)	NOT REPRESENTED		
Dallas (1)	Don Howard	present	present
Desa (1)	NOT REPRESENTED		
Drew (1)	Harold Wilson	present	present
Faulkner (2)	NOT REPRESENTED		
Franklin (1)	NOT REPRESENTED		
Garland (6)	David Gibbons	present	-
	Kevin Hale	present	-

House of Delegates Composition (*continued*)

Grant (1)	NOT REPRESENTED				Anthony Johnson	present	-
Greene/Clay (1)	Roger Cagle	present	present		Carl Johnson	present	-
Hempstead (1)	NOT REPRESENTED				Gail Jones	-	-
Hot Spring (1)	NOT REPRESENTED				David King	present	present
Howard/Pike (1)	Robert Sykes	present	present		Dean Kumpuris	-	-
Independence (2)	J.R. Baker	present	present		J.F. Kyser	-	present
	William Waldrip	-	present		Marvin Leibovich	present	-
Jackson (1)	Mufiz Chauhan	present	present		Steve Magie	present	-
Jefferson (5)	Simmie Armstrong	present	-		Jane McKinnon	-	present
	Omar Atiq	present	present		David Mumme	-	-
	David Jacks	present	present		Fred Nagel	-	-
	George Roberson	- present			George Norton	-	-
	Jerrye Woods	present	present		Richard Peek	-	present
Johnson (1)	NOT REPRESENTED						
Lafayette (1)	Brad Harbin	present	present		Carl Raque	present	present
Lawrence (1)	Robert Quevillon	present	present		John Redman	present	present
Lee (1)	NOT REPRESENTED				Ashley Ross	present	present
Little River (1)	NOT REPRESENTED				Ted Saer	-	-
Logan (1)	NOT REPRESENTED				Bruce Schratz	present	present
Lonoke (1)	NOT REPRESENTED				Frank Sipes	present	present
Medical Student	Vanessa McKinney	-	present		Kemp Skokos	-	-
Miller (3)	Joseph Robbins	present	-		Duane Velez	-	-
	Robert McRaney	-	-		Samual Welch	-	-
	Herbert Wren	-	-		Randolph (1)	NOT REPRESENTED	
Mississippi (1)	Joe V. Jones	present	-		Saline (2)	NOT REPRESENTED	
	Merrill Osborne	-	present		Sebastian (11)	Randy Ennen	-
Monroe (1)	NOT REPRESENTED					R. Cole Goodman	--
Nevada (1)	NOT REPRESENTED					Peter Irwin	-
Ouachita (1)	William Dedman	-	present			Greg Jones	present
Phillips (1)	Francis Patton	present	present			Mike Berumen	present
Polk (1)	David Fried	present	present			Robert Knox	-
Pope (3)	David Murphy	present	present			John Lange	-
Pulaski (37)	William Ackerman	present	present			Jack Magness	-
	D. B. Allen	-	-			Eugene Still	-
	Ray Biondo	present	-			John Swicegood	present
	Bob Cogburn	-	-			John Wells	-
	Michael Cope	-	-		Sevier (1)	NOT REPRESENTED	
	David Coussens	-	-		St. Francis (1)	NOT REPRESENTED	
	Gilbert Dean	present	-		Tri-County (1)	NOT REPRESENTED	
	Philip Deer, III	-	-		Union (2)	NOT REPRESENTED	
	Brad Diner	present	-		Van Buren (1)	John A. Hall	present
	Gilbert Dean	present	-		Washington (7)	David Davis	-
	Shirley DesLauriers	-	present			Anthony Hui	-
	Tom Eans	present	present			Sanford Hutson	present
	Jim English	present	-			William McGowan	-
	Charles Fitzgerald	--				Michael Morse	present
	Thomas Frazier	present	-			Danny Proffitt	-
	Fred Henker	present	present		White (2)	Mark Brown	-
	Reid Henry	-	-			David Covey	present
	Steve Hodges	-	-			NOT REPRESENTED	present
	Tom Jansen	-	-		Woodruff (1)	James Maupin	present
					Yell (1)		present

House of Delegates

First Session - May 2, 1996

Speaker of the House Anna Redman called the meeting to order on Thursday, May 2, 1996, at the 120th annual meeting of the Arkansas Medical Society. Dr. Payton Kolb asked for a moment of silence in memory of the physicians, physicians' spouses, and Alliance members who had passed away in the past year and gave the invocation.

Dr. Redman introduced Mrs. Evelyn Thomas, AMS Alliance President; and Mrs. Bobby Blackshear, AMS Alliance AMA-ERF Chairman; Mrs. Susie Reeder, AMA Alliance Membership Committee Chairman; and Mrs. Sancy McCool, Southern Medical Association Auxiliary President-elect.

Mrs. Evelyn Thomas presented Dr. I. Dodd Wilson, Dean, University of Arkansas College of Medicine, with two grants from the AMA Education and Research Foundation. The \$2,225.00 grant is intended for the pursuit of excellence in the medical school's programs and \$7,546.00 grant is restricted to financial assistance for medical students.

Dr. Redman announced there were 96 voting members in attendance.

Upon motion, the House approved the minutes of the 119th annual session as published in the June 1995 issue of *The Journal of the Arkansas Medical Society*.

Dr. Charles Logan presented plaques to: Dr. Paul Wallick who served as a councilor from 1984 to 1996; Dr. Jerry Mann who served as a councilor from 1989 to 1996; Dr. Robert Langston who served as a councilor from 1984 to 1996; Dr. Morton Wilson who served as a councilor from 1985 to 1996; and Dr. Robert Nunnally who served as a councilor from 1992 to 1996.

Plaques will be sent to Dr. Janet Titus who served



Dr. William N. Jones of Little Rock.

as a councilor from 1992 to 1996 and Dr. Thomas Hollis who served as a councilor from 1986 to 1996.

Dr. James Armstrong presented a plaque to Dr. Charles Logan who served as councilor to the Arkansas Medical Society from 1982 to 1996 and as Chairman of the Council from 1991 to 1996.

Dr. Joe Colclasure presented the 1996 Spirit of Service Award on behalf of the Arkansas Health Care Access Foundation to Dr. Kevin Hale of Hot Springs for being an outstanding volunteer.

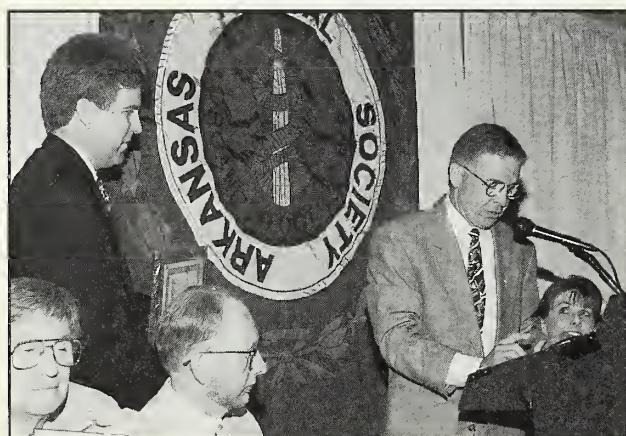
Dr. Redman announced the vacancies on the state boards and reminded the members from the counties in the districts and the Nominating Committee to meet immediately following the adjournment of the House to vote for three nominees for each vacancy. Vacancies will occur December 31, 1996 in the first congressional district and member-at-large position of the Arkansas State Board of Health. A vacancy will occur December 31, 1996, in the first congressional district of the Arkansas State Medical Board.

Dr. Redman announced the 1996-1997 Nominating Committee members: District #1: Dr. Merrill Osborne, Blytheville; District #2: Dr. Daniel Davidson, Searcy; District #3: Dr. Francis Patton, Helena; District #4: Dr. Harold Wilson, Monticello; District #5: Dr. Robert Nunnally, Camden; District #6: Dr. A. E. Andrews, Texarkana; District #7: Dr. Kevin Hale, Hot Springs; District #8: Dr. John Wilson, Little Rock; District #9: Dr. Carlton Chambers, Harrison; and District #10: Dr. Gerald Stolz, Russellville.

Dr. Redman announced that the Reference Committee meetings will begin at 9:30 a.m., Friday morning, May 3.

Dr. John Burge introduced the keynote speaker Dr. Lonnie Bristow, President of the American Medical Association. Dr. Bristow gave an update of the AMA's activities and discussed the need for physicians to be unified.

There being no further business the meeting adjourned until Saturday, May 4.



On behalf of the Arkansas Health Care Access Foundation, Inc., Dr. Joe Colclasure (at the podium) presents the 1996 Spirit of Service Award to Dr. Kevin Hale (at left standing) of Hot Springs.

House of Delegates

Final Session - May 4, 1996

Speaker of the House Anna Redman called the meeting to order on Saturday, May 4, 1996, and reported there were 79 voting members present.

Speaker Redman asked Dr. Carlton Chambers, Chairman of the Nominating Committee, to present the slate of officers:

President-elect:

Charles Logan, M.D., Little Rock

Vice President: Jim Crider, M.D., Harrison

Treasurer: Lloyd Langston, M.D., Pine Bluff

Secretary: Mike Moody, M.D., Salem

Speaker of the House: Anna Redman, M.D., Pine Bluff

Vice Speaker of the House: Kevin Beavers, M.D., Russellville

Delegates to the AMA:

John Burge, M.D., Lake Village (1/1/97-12/31/98)

William Jones, M.D., Little Rock (1/1/97-12/31/98)

Alternate Delegate to the AMA:

James M. Kolb, Jr., M.D., Russellville (1/1/97-12/31/98)

John Hestir, M.D., DeWitt (1/1/97 - 12/31/98)

Councilors:

District 1:	Dwight Williams, M.D., Paragould
District 2:	Daniel Davidson, M.D., Searcy
District 3:	Parthasarathy Vasudevan, M.D., Helena
District 4:	Harold Wilson, M.D., Monticello
District 5:	Fred Murphy, M.D., Magnolia
District 6:	George Finley, M.D., Hope
District 7:	Robert McCrary, M.D., Hot Springs
District 8:	Brenda Powell, M.D., Hot Springs
	David Barclay, M.D., Little Rock
	John Wilson, M.D., Little Rock
District 9:	Bruce Schratz, M.D., North Little Rock
	Carlton Chambers, M.D., Harrison
District 10:	William McGowan, M.D., Springdale
	John Swicegood, M.D., Fort Smith
	Gerald Stolz, M.D., Russellville

Dr. Charles Logan was elected president-elect by



*Dr. Anna Redman of Pine Bluff,
Speaker of the House of Delegates.*

acclamation as were the other nominees. The House of Delegates voted to elect Drs. Lloyd Langston and David Barclay in their absence.

The next order of business was the reports from the Reference Committees. The adoption of these reports was approved and is printed in this, the June 1996 issue of *The Journal of the Arkansas Medical Society*.

The report of the Council was given by Dr. Charles Logan, Chairman, and approved by the House to be filed for information.

Dr. Redman announced the following nominees for the state board positions: First Congressional District, Arkansas State Board of Health: Drs. Dwight Williams, Paragould; Roger Cagle, Paragould; and Joe Jones, Blytheville; Member-at-Large Position, Arkansas State Board of Health: Drs. James Maupin, Little Rock; Harold Wilson, Monticello; and Joe Jones, Blytheville; First Congressional District, Arkansas State Medical Board: Drs. Owen Clopton, Jonesboro; Trent Pierce, West Memphis; and Joe Jones, Blytheville.

Dr. Redman also announced that Dr. Carlton Chambers, Harrison, had been chosen Chairman of the Nominating Committee and Dr. Gerald Stolz, Russellville, Secretary.

Dr. James Armstrong gave a farewell address to the members and guests. This address is printed in this, the June 1996 issue of *The Journal of the Arkansas Medical Society*.

There being no further business the meeting adjourned.



Dr. Charles Logan is escorted to the podium as President-elect by Dr. Larry Lawson and Dr. John Burge.

1996-1997 Arkansas Medical Society Officers

John Crenshaw, M.D., Pine Bluff, President
Charles Logan, M.D., Little Rock, President-elect
James Crider, M.D., Harrison, Vice President
James Armstrong, M.D., Ashdown, Immediate Past President
Mike Moody, M.D., Salem, Secretary
Lloyd Langston, M.D., Pine Bluff, Treasurer
Anna Redman, M.D., Pine Bluff, Speaker, House of Delegates
Kevin Beavers, M.D., Russellville, Vice Speaker, House of Delegates

AMS Executive Committee Members

Gerald Stoltz, M.D., Russellville, Chairman
John Crenshaw, M.D., Pine Bluff, President
Charles Logan, M.D., Little Rock, President-elect
Mike Moody, M.D., Salem, Secretary
Lloyd Langston, M.D., Pine Bluff, Treasurer
James Armstrong, M.D., Ashdown, Immediate Past President

Councilors and Councilor Districts

First District

Dwight Williams, M.D., Paragould (1998); Joe Stallings, M.D., Jonesboro (1997) - Clay, Craighead, Crittenden, Greene, Lawrence, Mississippi, Poinsett, Randolph

Second District

Lloyd Bess, M.D., Batesville (1997); Daniel Davidson, M.D., Searcy (1998) - Cleburne, Conway, Faulkner, Fulton, Independence, Izard, Jackson, Sharp, Stone, White

Third District

Hoy B. Speer Jr., M.D., Stuttgart (1997); P. Vasudevan, M.D., Helena (1998) - Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Praire, St. Francis, Woodruff

Fourth District

John O. Lytle, M.D., Pine Bluff (1997); Harold Wilson, M.D., Monticello (1998) - Ashley, Chicot, Desha, Drew, Jefferson, Lincoln

Fifth District

Wayne Elliott, M.D., El Dorado (1997); Fred Murphy, M.D., Magnolia (1998) - Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita, Union

Sixth District

George Finley, M.D., Hope (1998); Michael Young, M.D., Prescott (1997) - Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk, Sevier

Seventh District

Brenda Powell, M.D., Hot Springs (1997); Robert McCrary, M.D., Hot Springs (1998) - Clark, Garland, Grant, Hot Spring, Montgomery, Saline

Eighth District

Vacant (1997); Paul Cornell, M.D., Little Rock (1997); David L. Barclay, M.D., Little Rock (1998); Joseph M. Beck II, M.D., Little Rock (1997); William N. Jones, M.D., Little Rock (1997); J. Mayne Parker, M.D., Little Rock (1997); John L. Wilson, M.D., Little Rock (1998); Anthony Johnson, M.D., Little Rock (1997); Bruce Schratz, M.D., North Little Rock (1998) - Pulaski

Ninth District

Carlton Chambers, M.D., Harrison (1998); William McGowan, M.D., Springdale (1998); David Davis, M.D., Fayetteville (1997) - Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, Washington

Tenth District

John Swicegood, M.D., Fort Smith (1998); Gerald A. Stoltz, M.D., Russellville (1998); Paul I. Wills, M.D., Fort Smith (1997) - Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian, Yell

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Reference Committee #1

David Jacks, M.D., Chairman

Reference Committee #1 was composed of: Dr. John Ashley, Newport; Dr. Jerry Fontenot, Little Rock; Dr. Derek Lewis, Little Rock; Dr. David Murphy, Russellville; Jeff Marotte, Medical Student Representative; and Dr. David Jacks, Pine Bluff, Chairman.

This Reference Committee gave careful consideration to the following item: Resolution from the Arkansas Academy of Family Physicians Concerning COLA's Accreditation Program for Laboratories. This Reference Committee offers the following substitute resolution:

Whereas, the Commission on Office Laboratory Accreditation (COLA) is the only not for profit education and accreditation organization specifically designed to meet the needs of physician directed laboratories that are practice based and was founded by the American Academy of Family Physicians, the American Medical Association, the American Society of Internal Medicine, and the American Association of Pathologists; and

Whereas, the Commission on Office Laboratory Accreditation (COLA) is approved by the Health Care Financing Administration as an educational alternative to federal certification of laboratories under CLIA 88; therefore be it

Resolved, that the Arkansas Medical Society endorse the accreditation program for laboratories of the Commission on Office Laboratory Accreditation; and be it further

Resolved, that the Arkansas Medical Society publicize information about the Commission on Office Laboratory Accreditation and encourage physicians to seek clinical laboratory accreditation through COLA as their peer review alternative to federal certification under CLIA 88.

Resolved, that the Arkansas Medical Society acknowledge the accreditation program for laboratories of the Commission on Office Laboratory Accreditation as an alternative to federal certification under CLIA 88; and be it further

Resolved, that the Arkansas Medical Society make information about the Commission on Office Laboratory

Accreditation available to its membership.

This Reference Committee recommends the adoption of the substitute resolution.

This Reference Committee carefully reviewed and discussed the following reports printed in the April issue of *The Journal of the Arkansas Medical Society*:

Arkansas Medical Society 1996 Budget, Dr. Jerry Mann, Chairman; Report of the Executive Vice President, Ken LaMastus, Executive Vice President; Physicians' Health Committee, Dr. Joe Martindale, Chairman; AMS Management Company, Janell Mason, COO.

Reference Committee #1 recommends that these reports be filed for information.

This Reference Committee gave careful consideration to the following items and request that they be considered separately: Annual Session Committee, Dr. Jerry Mann, Chairman; CME Accreditation Committee, Dr. Steve Strode, Chairman; and Report of the Council, Dr. Charles Logan, Chairman.

This Reference Committee recommends that the report of the Annual Session Committee be filed for information and that Dr. Mann and the Arkansas Medical Society staff be commended for their hard work in preparing for the Annual Sessions each year.

This Reference Committee recommends that the report of the CME Accreditation Committee be filed for information and that the AMS President take into consideration the logistical and time commitments necessary to adequately carry out the mission of this committee when making committee appointments.

This Reference Committee recommends that the report of the Council be filed for information and that Dr. Logan be commended for serving as Chairman of the Council for the last five years and that the House of Delegates join our committee in a standing ovation in honor of Dr. Logan.

This concludes the report of Reference Committee #1. The chairman wishes to thank those who appeared before the Committee, members of the Committee, and David Wroten and Nadine Gentry of the AMS staff for their assistance.



Reference Committee #2

Kim Graves, M.D., Chairman

Reference Committee #2 was composed of: Dr. Omar Atiq, Pine Bluff; Dr. Brad Harbin, Stamps; Dr. Robert Sykes, Nashville; Richard White, Medical Student Representative; and Dr. Kim Graves, Clarksville, Chairman.

This Reference Committee carefully reviewed and discussed the following reports printed in the April issue of *The Journal of the Arkansas Medical Society*: Medical Education Foundation for Arkansas, Dr. Martin Eisele, President; Medical Services Review Committee, Dr. Joe Stallings, Chairman; AMS Medical Student Section, Brian Meyer, Immediate Past President; Ouachita County Medical Society, Dr. Robert Nunnally, Secretary/Treasurer; Pulaski County Medical Society, Fred Reddoch, Executive Director; Arkansas Health Care Access Foundation, Dr. Joe Colclasure, President; and Arkansas State Medical Board, Peggy Pryor Cryer, Executive Secretary.

Reference Committee #2 recommends that these reports be filed for information.

This Reference Committee gave careful consideration to the following items and request that they be considered separately: Ad hoc Committee on Managed Care,

Dr. Glen Baker, Chairman; and Arkansas Department of Health, Dr. Sandra Nichols, Director.

This Reference Committee recommends that the report of the Ad hoc Committee on Managed Care be filed for information and that members of the Arkansas Medical Society be educated about THG and the relationship and the impact on the local AMCOs.

Many concerns were expressed about the issue of home health and the need for physicians to be better informed about their role in certifying home health needs. This Reference Committee recommends that the report of the Arkansas Department of Health be filed for information; and that the Arkansas Medical Society develop and provide information to educate physicians about their roles and obligations in home health; and that Dr. Sandra Nichols be commended for her exemplary service as Director of the Department of Health.

This concludes the report of Reference Committee #2. The chairman wishes to thank those who appeared before the Committee, members of the Committee, and David Wroten and Tina Wade of the AMS staff for their assistance.



1996-1997 Council of the Arkansas Medical Society



1996-1997 Arkansas Medical Society Council Officers

Report of the Council

May 2-3, 1996

The Council of the Arkansas Medical Society met May 2-3, 1996, at the Excelsior Hotel in Little Rock. The following business was received and transacted:

1. Upon motion the Council approved a resolution authorizing the Board of Directors of the AMS Management Company to 1) sign a letter of intent with THG Management Services for the purchase of the AMS Management Company and complete the sale according to those terms; 2) authorize the Board to take the necessary steps to dissolve the corporation; and 3) encourage the AMCO's to execute new management agreements with THG Management Services.
2. Upon motion the Council approved the minutes of the March 31, 1996 Council meeting.
3. The following reports were accepted for information: AMS Membership Report, AMS Budget Report, AMS Audit for 1995 and MEFFA Audit for 1995.
4. Dr. Lonnie Bristow, President of the American Medical Association, greeted the Council members and briefly discussed legislative issues in Washington regarding anti-trust and the AMA meeting to be held in June.
5. Dr. William Jones discussed the AMA's recent announcement concerning the divestment of all tobacco related stocks, bonds, and mutual funds. Upon motion, the Council voted for the Budget Committee to undertake a comprehensive study of investment portfolios of the Arkansas Medical Society, the AMS Pension Plan, and MEFFA to determine every instance where our monies are invested in tobacco companies, their subsidiaries, and/or mutual funds holding tobacco stocks and bonds; and that a report be made to the Council at our next meeting at which time the Council will consider divestment of all tobacco related stocks, bonds, and mutual funds.
6. Dr. Glen Baker gave an update on the new foundation for the Physicians' Health Committee, the Arkansas Medical Foundation.
7. Dr. William Jones discussed the new Medicare HMO techniques for credentialing physicians by requesting to review random office charts. Upon motion the Council voted to refer this issue to the Arkansas State Medical Board for investigation to determine if this represents a breach of medical ethics and the Medical Practices Act.
8. The Council made the following committee appointments:

Budget Committee: Gerald Stolz, Russellville and Robert McCrary, Hot Springs.
Journal Editorial Board: reappointed Ben Saltzman, Mountain Home, family practice and reappointed Lee Abel, Little Rock, internal medicine.
Medical Education Foundation for Arkansas: reappointed Martin Eisele, Hot Springs.
Arkansas Medical Society Pension Plan Board of Trustees: Wayne Elliott, El Dorado.
Committee on Position Papers: reappointed Roger Cagle, Paragould, Chairman; reappointed Paul Wills, Fort Smith; reappointed Paul Wallick, Monticello; reappointed Martin Fiser, Little Rock; and reappointed Peter Marvin, North Little Rock.
Medical Services Review Committee:
Family Practice: Kerry Pennington, Warren, *General Surgery:* Samuel Landrum, Fort Smith, *Obstetrics/Gynecology:* Karen Kozlowski, Little Rock, *Internal Medicine and Pediatric Representatives:* positions open pending reports from their organizations.
Pathology: Gerald Stolz, Russellville, *Orthopaedic Surgery:* David Newbern, Little Rock
MSRC Subcommittee of Subspecialties:
Emergency Medicine: James Tutton, Benton
Nephrology: Ronald Hughes, Little Rock
Pediatric Allergy: Joseph Matthews, Little Rock
Physicians' Advisory Committee to Medicare:
Emergency Medicine: James Tutton, Benton
Family Practice: Kerry Pennington, Warren
General Surgery: Samuel Landrum, Fort Smith
Nephrology: Ronald Hughes, Little Rock
Obstetrics/Gynecology: Janet Cathey, Little Rock
Orthopaedic Surgery: D. Gordon Newbern, Little Rock
Pathology: Gerald Stolz, Russellville
Pediatric Representative: position open pending report

from their organization

Physicians' Health Committee: Stacey Johnson,
Mountain Home

9. Upon motion the Council approved a change to the bylaws for the Physicians Advisory Committee for a term of three years and a member cannot serve more than one term. This will coincide with the MSRC bylaws.

10. Dr. Burge discussed the AMA Federation to be voted on at the AMA House of Delegates meeting in June and encouraged everyone to give AMS delegates their comments.

11. Upon motion the Council approved requests for dues exemption for life, emeritus, and affiliate memberships for the physicians listed below.

Physician	Date of Birth	First Year In Practice	County	Membership
Berry, Frederick B.	04/21/27	1952	Hot Spring	LIFE
Browning, Donald G.	12/26/35	1968	Pulaski	AFFILIATE
Campbell, James W.	08/16/29	1958	Pulaski	EMERITUS
Chester, Robert L.	10/29/26	1956	Sebastian	EMERITUS
Chock, Helga E.	12/10/39	1979	Baxter	AFFILIATE
Cook, Charles	04/10/47	1974	Sebastian	AFFILIATE
Cornell, Paul J.	06/09/35	1965	Pulaski	EMERITUS
Darden, Lester R.	09/11/35	1961	Crawford	EMERITUS
Decker, Harold	01/09/32	1961	Washington	EMERITUS
Doyle, Edward	05/06/34	1964	Crawford	AFFILIATE
Dykstra, Peter C.	10/29/27	1953	Baxter	EMERITUS
Ellis, Homer G.	05/27/26	1956	Sebastian	LIFE
Garrison, James S.	11/27/37	1971	Faulkner	EMERITUS
Glenn, Wayne B.	01/25/32	1960	Pulaski	EMERITUS
Glover, W. Clyde	04/07/32	1958	Pulaski	EMERITUS
Goza, George M. Jr.	10/18/26	1978	Pulaski	AFFILIATE
Hardin, Robert	12/14/35	1965	Pulaski	AFFILIATE
Harris, Howard R.	09/20/25	1955	Desha	LIFE
Hayes, J. Harry Jr.	05/23/31	1962	Pulaski	AFFILIATE
Henderson, Francis M.	03/30/33	1963	Jefferson	EMERITUS
Jacks, John W.	01/04/23	1950	Benton	AFFILIATE
Keane, Patrick K.	07/19/44	1976	Benton	AFFILIATE
Kelley, Charles W.	03/24/28	1957	Columbia	EMERITUS
Kennedy, Charles H.	02/23/26	1953	Pulaski	LIFE
Langston, Robert H.	03/16/31	1960	Boone	EMERITUS
Lowry, James L.	12/16/38	1971	Clark	AFFILIATE
Mashburn, William R.	06/08/29	1961	Garland	AFFILIATE
McAlister, Joseph H.	05/02/25	1954	Washington	AFFILIATE
Miller, Donald L.	12/03/28	1960	Jefferson	EMERITUS
Mings, Harold H	09/29/32	1962	Sebastian	EMERITUS
Moose, John I.	04/15/37	1966	Benton	EMERITUS
Nixon, William R.	05/02/26	1957	Jefferson	LIFE
Patton, Francis M.	11/26/27	1961	Phillips	EMERITUS
Peacock, Norman W. Jr.	08/19/18	1943	Little River	AFFILIATE
Purcell, Donald I.	12/06/26	1950	Greene/Clay	LIFE
Roberts, William J.	12/27/36	1964	Logan	AFFILIATE
Sanders, James W.	01/29/35	1981	Craighead/Poinsett	EMERITUS
Sapiro, Gary S.	09/21/38	1972	Craighead/Poinsett	AFFILIATE
Schemel, William H.	05/03/33	1959	Sebastian	EMERITUS
Schultz, Wayne H.	06/15/26	1955	Union	LIFE
Ward, Hiram T.	11/26/25	1953	Howard/Pike	LIFE
Wikman, John H.	09/27/34	1960	Sebastian	EMERITUS
Williams, Rhys A.	01/02/29	1959	Boone	EMERITUS
Wright, John D.	08/15/25	1953	Saline	LIFE



Farewell Address

James Armstrong, M.D.
President 1995-1996

Madam speaker, honored guests, members of the House of Delegates, and visitors:

First of all, let me express my sincere appreciation and thanks to Executive Vice President Ken LaMastus, David Wroten, Lynn Zeno, Kay Waldo, and the entire staff of the Arkansas Medical Society. My job this year as president would have been impossible without their expertise. We are, indeed, most fortunate to have a group of people who are diligent, knowledgeable, and dedicated to the successful performance of this organization. Their help and kindness have made my year a genuine pleasure. Let me also express my gratitude to the Executive Committee and to the Council for their willingness to give of their time and judgment to resolve issues which have confronted us.

As the year during which I have had the honor of serving as your president comes to a close, I would like to reflect on some of the accomplishments of the Society during this period and to discuss some of the challenges which I envision will continue to confront us in the future. The multitude and complexity of changes which are occurring in the medical profession will continue to require study, understanding, and re-evaluation of traditional tenets for us individually and for our medical organizations as a whole.

I would like to review with you some of the accomplishments of your Society during this past year. The Arkansas Medical Society has represented the interest of the medical profession in a multitude of public hearings, workers' compensation debates, Medicare reform and other legislative issues. We were able to successfully challenge and overturn a required twelve-hour annual CME requirement by the Workers' Compensation Commission. We took a major role in a successful effort to reverse mandatory managed

care organizations for workers' compensation. We sent a clear message to insurance companies through the passage of the Any Willing Provider/Patient Protection Act that patients and their doctors should be in control of health care, and we have coordinated a legal defense fund to fight insurance companies' attempts to challenge that act.

We have successfully lowered the statute of limitations for lawsuits concerning treatment of minors, thereby reducing medical liability exposure by fifty percent. We have helped defeat a proposal allowing independent practice and independent prescription writing authority by Advanced Practice Nurses. We have helped defeat plaintiff attorneys' efforts to increase medical liability and exposure which would have increased malpractice insurance premiums.

We have worked with the Arkansas Congressional Delegation to reinstate separate payments for EKGs and to eliminate reimbursement reductions for new physicians under Medicare. We have monitored nearly two thousand bills submitted during the 80th Arkansas General Assembly. We have maintained contact with the Arkansas Congressional Delegation in Washington, D.C., as they considered health care reform, tort reform, and countless other federal rules and regulations.

This Society has continued to operate the Medical Education Foundation for Arkansas, a private foundation providing grants for speaker and medical items needed for medical education. We have assisted over seventy impaired physicians through the Physicians' Health Committee and we established, in April of this year, the Arkansas Medical Foundation to provide a full-time office and medical director for the physicians' health program. We have helped fund for the Arkan-

sas Medical Society Alliance monies for office space and an executive secretary.

What must we expect to confront during this next year? Certainly, state and national legislative sessions will present a multitude of issues which will affect all of us. Our strength has been in a unified effort by all segments of our medical community. Efforts by others outside our profession will try to exploit divisions within us to accomplish agendas which may not reflect our best interest or that of our patients.

The Arkansas Medical Society must act to address and coordinate the interests and actions of all of our various components so our collective voice will remain strong, influential, and unified in the political arena. This society must recognize the new and changing

patterns of practice and methods of health care delivery, and we must provide leadership and direction in our professional efforts to continue to provide the highest quality of health care available anywhere in the world.

Each of us must remember our first and foremost responsibility is to our patients. Regardless of practice arrangements, government regulations, or other outside influences, our primary duty is to provide compassionate and quality health care to those who seek our help.

It has been my privilege to serve this past year as your president. This has been a most singular honor, and I thank you. I trust you will continue to give your support and cooperation to this society and to my successor, Dr. John Crenshaw.



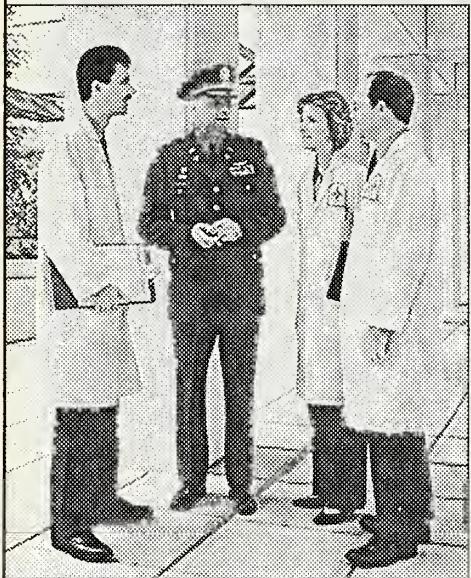
Dr. Crenshaw presents Dr. Armstrong with a framed cover from *The Journal of the Arkansas Medical Society*.

On behalf of the AMS, Dr. Crenshaw presents an alarm clock shaped like a fishing reel to Dr. Armstrong. As Dr. Crenshaw sounds the alarm, everyone listens as a fisherman casts a line.



Dr. Armstrong with his daughter, Jimmie, son-in-law, Blane and his wife, Judy.

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Arkansas Medical Society Alliance

72nd Annual Session

AMSA Annual Session Report

The seventy-second Annual Session of the Arkansas Medical Society Alliance met at the Excelsior Hotel in Little Rock May 2-4, 1996.

Evelyn Thomas, President, presided over the pre-convention board meeting and the general sessions of the House of Delegates. In her closing speech, Mrs. Thomas related her experience at a medical student wife member who joined the Auxiliary (Alliance) in 1958. She paid tribute to Mona Lawson whom she met at a fashion show meeting in Trapnall Hall in 1959. Mrs. Lawson, who died recently, became Evelyn's mentor and role model. Evelyn expressed her gratitude to her husband, Jerry, and to the members of the board for their support during the year.

In her report of the year's activities, Mrs. Thomas cited the emphasis on awareness of domestic violence and reported on her visits to local chapters. She was often accompanied by Nancy Hickin, VISTA worker with the Northeast Arkansas Council on Family Violence. The two also presented programs to organizations other than AMSA chapters. Other achievements Evelyn noted included the increase in membership and the hiring of a Director of Administrative Services for the Alliance. She recognized Arleta Power and Mary Ann Stalling for their roles on the three-year reorganization team.

During the business sessions, members and delegates heard reports from all state officers and from county and district presidents. Delegates voted to revise the bylaws and constitution to accommodate the new organizational structure giving the Director of Administrative Services responsibility for duties formerly assigned to the ArkMap editor, publicity chairman, corresponding secretary and convention chairman.

After a report from Sebastian County, a special collection of \$250 was taken for victims of the recent tornadoes there.

In addition to the business sessions, the Annual Session included receptions for Ruth Mabry, incoming president; and Nancy Russ, Director of Administrative Services; a silent auction, which was part of the AMS Wall Street Party; the past presidents' breakfast and the installation luncheon.

Ruth Mabry Named President

Ruth Mabry of Pine Bluff was elected 1996-97 president of the Arkansas Medical Society Alliance at the Annual Session. Ruth has been a member of the Alliance since 1982. She has served as a member of the

board and president of the Jefferson County Alliance and as a member of the state board for the past four years.

Ruth is a registered nurse and is working toward a Bachelor of Science in nursing. She works part time in the office of her husband, Dr. Charles Mabry, who is a general, thoracic and vascular surgeon. The Mabrys have three children—David, Scott and Erin.

A member of the Jefferson County Chapter of the American Red Cross, Emergency Nurses Association, Volunteers in public schools and Trinity Episcopal Church, Ruth still finds time to play tennis. She is a member of the U. S. Tennis Association and is captain of a 3.0 ladies' tennis team.

Featured Speakers Represent Southern and National Alliances

Susie Reeder, membership chair of the American Medical Association Alliance; and Sancy McCool, president elect of Southern Medical Association Auxiliary, were guest speakers at the AMSA.

Reeder discussed the role of the national organization as a support network that provides "clout" through numbers for projects and legislation. She noted the \$1.4 million that county and state organizations contribute to medical education nationwide. The national group also provides materials and information, and opportunities for professional and personal growth through leadership conferences.

McCool talked about the organization that created Doctor's Day. March 30 was chosen as the official date because that's the day the first ether anesthesia was given; President Bush made the date official in 1990. McCool also noted the organization's five-year breast cancer awareness project. In addition to other materials and support for the project, National provided two billboards for each state.

Mona Lawson Honored at Presidents' Breakfast

Mona Rogers Lawson was honored at the Past Presidents' breakfast on Friday morning during the Annual Session. Mona was president of the Arkansas Medical Society Alliance in 1948-49 and served as president of both the Pulaski County Alliance and the national (American Medical Society) Auxiliary. She held life memberships in all three organizations. Past presidents and other Alliance members contributed \$585 to the Mona Rogers Lawson Scholarship Fund.

Nineteen past presidents attended the breakfast hosted by Ginny Blaylock, Carlyn Langston and Margaret Ann Morgan. Mary Ann Stallings, immediate past president, was initiated.

Alliance Presidential Address

Ruth Mabry
President 1996-1997

I want to thank all of you for this opportunity to serve as the President of the Arkansas Medical Society Alliance. I would like especially to thank my husband, Charles, for his support now and in the year to come, Evelyn Thomas for her leadership, our special guests from Southern Medical Association Auxiliary and American Medical Association Alliance, our 50-year members and the members here from Jefferson County.

My goals for the year include more involvement between county and state levels, an increase in membership, fundraising to support AMA—ERF, and legislative support. I want to set a membership goal. Evelyn was able to increase membership this year to a total of 700 members. I am setting a goal of a previously set record of 1,000 members at the state level and encourage all members to join at the national level as well.

My interest and enthusiasm come from my involve-

ment over the years at the county level. This is the "root" of our Alliance. It is at this level that our organization must grow or we will be unable to exist. The leadership for projects comes from the national and state level, but the actual link to patients, providers and community is at the county level. I plan an orientation session for the county presidents and presidents-elect in late summer. The Board and membership have approved sending two more (a total of six) county members to Leadership Confluence in Chicago this year. This training is a direct benefit of belonging at both the state and national level of our organization.

This is definitely the year to be involved in politics since it is an election year. I hope we will be involved in issues needing support by the Arkansas Medical Society.

In closing, I want all of you to know how pleased and proud I am to represent you as the president of our Arkansas Medical Society Alliance.

AMSA 1996-1997 Officers

President: Ruth Mabry, Jefferson County

President-elect: Barbara Moody, Member at large

Recording Secretary: Nanette Stroope, Craighead/Poinsett Counties

Treasurer: Liz Pollard, Jefferson County

Vice President Health: Cheryl Pahls, Pulaski County

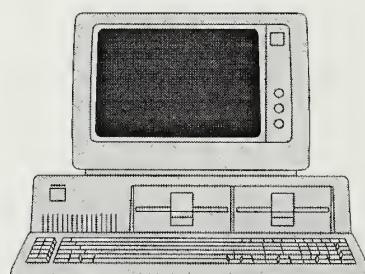
Vice President, Legislature: Wendy Carlisle, Bowie/Miller Counties

Vice President, Membership: Nancy Ivy, Washington County

Silent Auction Funds Computer

A silent auction held by the AMSA in conjunction with the AMS Wall Street Party netted enough money to buy a computer for the AMSA office. Items valued at more than \$8,000, including a \$4,000 necklace contributed by Kahn's Jewelers in Pine Bluff, netted \$3,756.50. Every county chapter supported the auction with donated items or a cash contribution.

The computer is one more step in



a three year project that resulted in a restructuring of the board and a grant from the Medical Society to hire a part-time Director of Administrative Services. The DOAS is available to assist officers, handle correspondence and membership renewals and publish the ArkMap. President Thomas presented Arleta Power and Mary Ann Stallings with certificates of appreciation for their roles in the special project.



Installation luncheon head table.

AMSA President Ruth Mabry with Evelyn Thomas, Immediate Past President, and Mary Ann Stallings, Past President.



Mary Ann Stallings, AMSA 1994-1995 President, is initiated into the Past Presidents' Club.

VISTA Volunteer Nancy Hickin (who works with the NEA Council on Family Violence) with Evelyn Thomas at the AMSA exhibitor's booth.



Fifty Year Club



The Fifty Year Club is composed of physicians who, for the past fifty years, have loyally and effectively served the community and, by skill and devotion to high ideals, upheld and maintained the standards of the medical profession.

Dr. Ben Saltzman presided over the Fifty Year Club luncheon meeting. Physicians attending the luncheon were Drs. John Ashley, Max Baldridge, Robert Calcote, Gilbert Campbell, Gilbert Dean, Milton Deneke, Ralph Downs, Kenneth Duzan, Martin Eisele, C. R. Ellis, George Fotioo, John Guenthner, James Guthrie, James Headstream, Fred Henker, Ernest King, Payton Kolb, C. C. Long, Sloan Rainwater, Kenneth Seifert, James Smith, William Stanton, C. E. Thomas, James Walt, and Morton Wilson.

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1996 Arkansas Medical Society Shuffield Award

*Presented Friday, May 3, 1996
to
Havis Hester*



(From left) Rep. Scott Ferguson, M.D., presents the award to Havis Hester

State Rep. Scott Ferguson, M.D., of West Memphis, presented the 1996 Shuffield Award to Havis M. Hester, Jefferson County Coroner, of Pine Bluff during the 120th Annual Session.

The Shuffield Award is given each year to recognize a non-physician who has made significant contributions to their community in the area of health care. The award is named in honor of the late Drs. Joe and Elvin Shuffield, a father and son team from Little Rock, who devoted their lives to the quality of health care in our state.

Hester initiated and continues to maintain the "Check on Your Neighbor" program which raised the community's consciousness about the risk to elderly individuals whose homes were without air-conditioning. He also initiated a program entitled, "Shadows of the Medical Field" whereby young high school age students are brought into the hospital to "shadow" a health professional in their area of interest. The interest and enthusiasm demonstrated by the young people involved is very inspirational, and a number of them have been inspired to pursue their education in this area.

Another program Hester has initiated is one for carbon monoxide testing on automobiles and home heaters. He has also provided reflector strips for the handicapped on walkers and wheelchairs. In addition, he has promoted safety on the highways as well as boating and swimming.

Hester gives a number of educational programs in the area schools, church groups, senior citizen centers and for law enforcement agencies. He has sponsored a Drug Free Jamboree each year with games and entertainment.

He is a past president of the Intercity Kiwanis and the Arkansas Coroners Association. Other professional and civic affiliations include the Chamber of Commerce, International Coroners and Medical Examiners Association, National Sheriffs Association, Arkansas Law Enforcement Association, Fraternal Order of Police, Youth Suicide Prevention Commission, Pines Technical College Advisory Council and Committee, and International Association of Identification.

The Golf Tournament



From left: Walter Selakovich, M.D., John Pike, M.D., Ramond Read, M.D., and Frank Sipes, M.D.



From left: Paul Meredith, M.D., Bill McGowan, M.D., John Crenshaw, M.D., and Charles Logan, M.D.



From left: Asa Crow, M.D., Jerry Mann, M.D., A.E. Andrews, M.D., and Lynn Zeno.



From left: Don Brandsgaard, exhibitor, Carl Johnson, M.D., Brad Diner, M.D., and Sha Williamson, exhibitor.



The Winning Team! From left: Jay Radcliff, Joe Morgan, Bob Fewell and Randy Coleman, all representing American Investors Corporation.



1996 Grand Prize Winners



Robert L. Baker, M.D., of Mountain Home, was the grand prize winner of a \$1,000 Worldwide Travel gift certificate for a trip to the destination of his choice.

Angie Warren, of National Park Medical Center, won the exhibitor grand prize of \$200.



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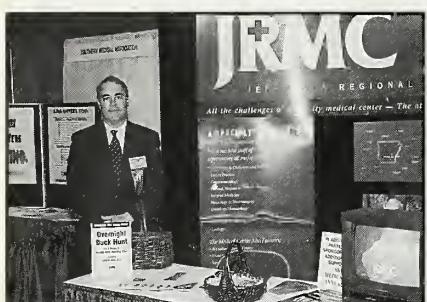
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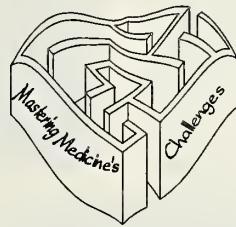
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Thank You!

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The AMS Annual Session would not be possible without the support of our sponsors. The Society thanks the following for their support of the 120th Annual Session:

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Annual Session Pics



Photo to the left: Our photographer catches Gilbert O. Dean, M.D., of Little Rock as he sits in the red Mercedes brought for display in the exhibit hall by Autoflex Leasing.



Two photos above: A crowd gathers around as members of the Metropolitan Junior Chamber of Commerce update and forecast the market during the Wall Street Game.



Photo to the left: Asa Crow, M.D., and A.E. Andrews, M.D., at the Wall Street Party.

Photo to the right: Immediate Past President James Armstrong, M.D., talks with Charles Logan, M.D., and Jerry Mann, M.D.



More Annual Session Pics



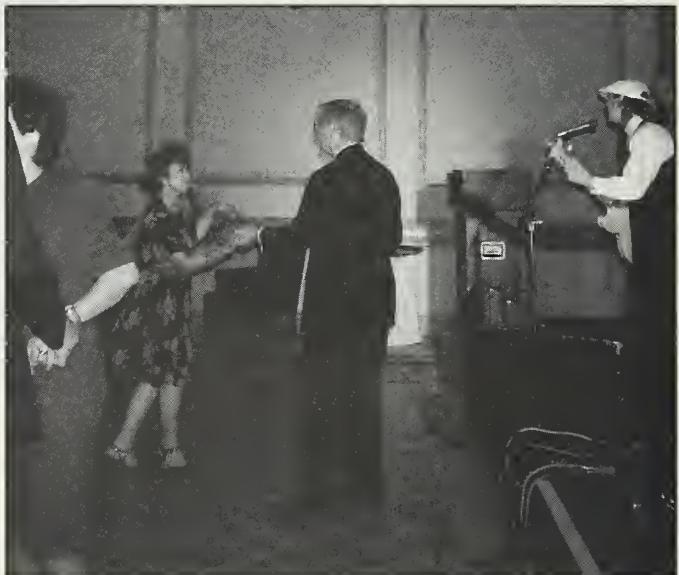
Photo to the left: Vice President James Crider and his wife.

Photo below: J. Larry Lawson, M.D., and his wife, Nikki, tear up the dance floor on this number at the President's Reception and Dance.



Photo above: President John Crenshaw, M.D.

Photo to the right: Everyone dances the night away at the President's Reception and Dance.



In Memoriam

The following members of the Arkansas Medical Society and Arkansas Medical Society Alliance
were remembered during the 1996 AMS Annual Session.

Society Members:

E. Clinton Texter, Little Rock
Walter P. Harris, Danville
Henry N. Rogers, Mena
Lelon J. Bull, Yucaipa, California
R. Frank Rhodes, Osceola
Douglas W. Parker, Van Buren
Vida H. Gordon, Little Rock
Francis E. Shearer, Alma
Joseph F. Gartman, Carlisle
Caswell M. Kirkman, Helena
Charles A. Archer, Conway
Lucille K. Champion, North Little Rock
J. Arnold Henry, Russellville
William K. Jordan, Pine Bluff
John C. Winters, Desha
Debra L. Owings, Little Rock
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William A. Runyan, Little Rock
Glen P. Schoettle, West Memphis
Norman Hill, Lake Village
C. Lynn Harris, Hope
Hayden Nicholson, Santa Clara, California
Robert W. Ross, Conway
James C. Barnett, Heber Springs
J.W. Carney, Newport
Kingsley W. Cosgrove Jr., Little Rock
Leston E. Fitch, Conway
Charles R. Winn, Little Rock



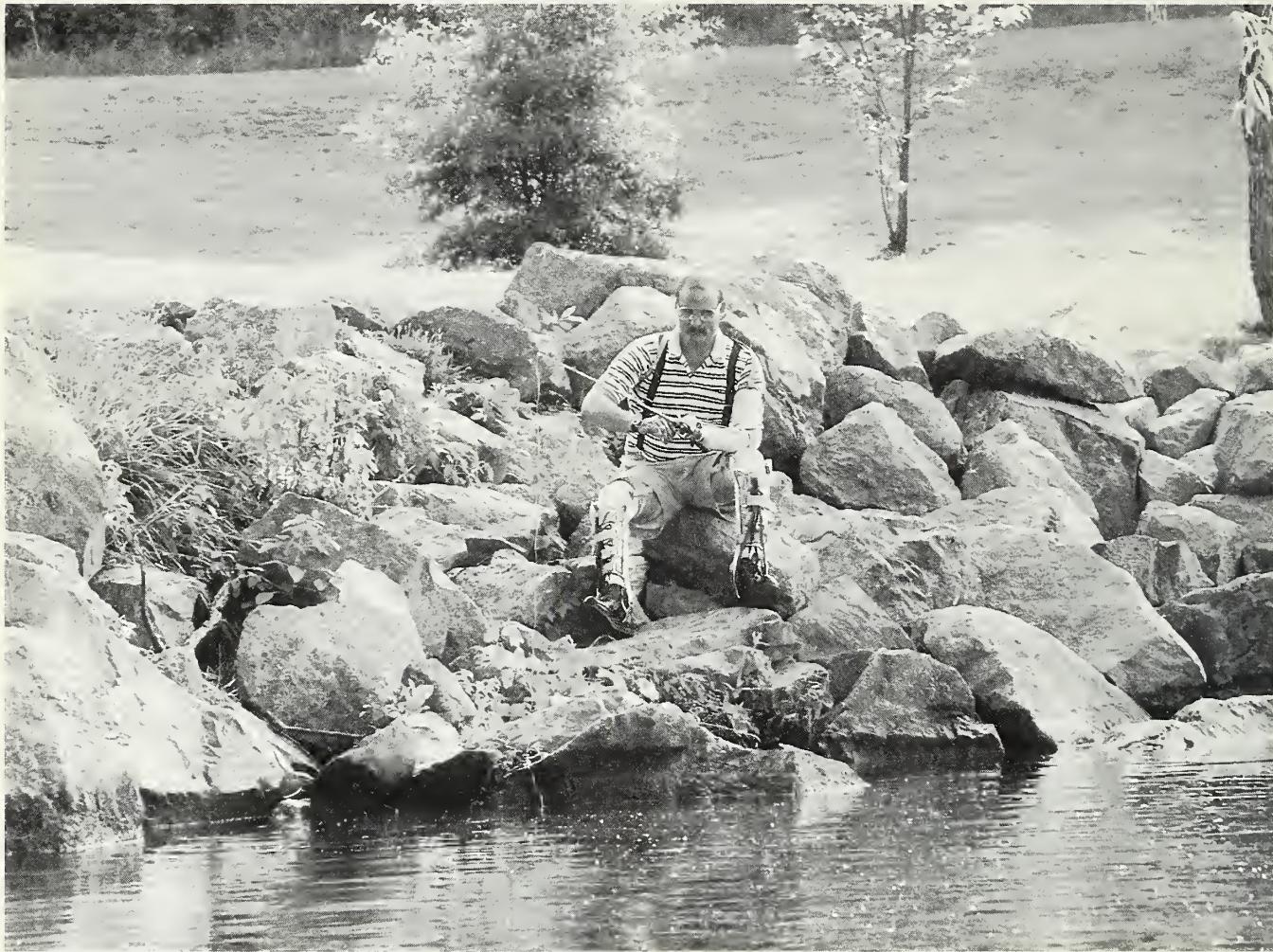
Alliance Members and Spouses:

Mrs. Neil E. Crow, Sr., (Mary K.) Fort Smith
Mrs. Waldo Regnier (Mary E.), Crossett
Mrs. George W. Jackson (Mary G.), Hot Springs
Mrs. Martin E. Blanton (Sallie Mae), Jonesboro
Mrs. Russell Cobb (Mary), Malvern
Mrs. E. J. Ritchie (Leona), North Little Rock
Mrs. Charles D. Cyphers (Margaret), El Dorado
Mrs. Gaston A. Hebert (Velda), Hot Springs
Mrs. Mason G. Lawson (Mona), Little Rock

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Mindy D. Boyles, R.N.*
J. David Talley, M.D.**

GLOVES: FRIEND OR FOE?

The fear of contacting an infectious agent has increased the use of gloves (Figure 1), both sterile and unsterile, latex and rubber, in the patient-care environment. At present, the University Hospital of Arkansas uses nearly 225,000 pairs of sterile gloves, and more than 2,225,000 pairs of non-sterile gloves annually. This expanded practice is associated with an concomitant concern regarding the reports of glove-related allergic reactions and the degree of safety that gloves provide against infectious agents. This review will discuss recent information on glove technology.

Patient Presentation

A 26-year-old registered nurse worked in a coronary care unit in a tertiary care hospital. She developed an erythematous, eczematous rash on the dorsal aspects of her hands extending to the wrist within several days after wearing latex gloves. She had no systemic hypersensitivity reactions including shortness of air, angioedema, or pruritis. She was extremely sensitive to kiwi fruit; merely tasting the fruit caused severe swelling of the oral mucosal membranes. She had no other allergies. The use of low-allergen, non-powdered gloves decreased the occurrence of this presumptive local, type IV delayed hypersensitivity reaction to latex.

Discussion

Latex, also known as natural rubber latex, is a processed plant product, derived from the milky sap of the rubber tree, *Hevea brasiliensis*. It was brought from South America to Europe in the mid-18th century. Joseph Priestley named it *rubber* in 1770 when he discov-

ered it could rub away pencil marks. In 1818, James Syme used it to waterproof cloth for raincoats; five years later Charles Macintosh patented the process. In 1839, Charles Goodyear discovered the process of vulcanization—adding sulfur to heated rubber—which produced a more flexible, elastic and durable material.¹

Localized reactions to latex gloves Local reactions to latex have been reported since the first part of the 20th century. These T-cell mediated reactions produce local effects including erythema and edema within hours to a few days after wearing the gloves. The allergen may be one of several compounds in the glove, including soluble proteins in the latex itself, chemicals added in the preparation of the glove, or starch powder which is used as a lubricant in the inside of the glove.² The incidence of local reactions is rising, and is now estimated to occur in 5 to 10% of health care providers. Patients with spine bifida have a high incidence of latex allergy which may be related to heightened sensitization from frequent exposure to urinary catheters and sterile gloves or a genetic abnormality in the immune system.³ An association with an allergy to kiwi, avocado, banana, or chestnut has also been reported.¹

Systemic reactions to latex gloves Systemic reactions to latex are immediate, antigen-antibody (IgE) mediated, and maybe be life threatening. Exposure to the antigen maybe either by cutaneous, mucosal, or parenteral routes. Cutaneous exposure results in contract urticaria, angioedema, or pruitis. Exposure of the respiratory or parenteral mucosa may cause rhinitis, asthma, or anaphylaxis. Frequent occupational exposure may increase the sensitivity to latex. Latex sensitization may be detected with the skin prick test.⁴ Use of hypoallergenic gloves (either with minimal or no powder) decreases the occurrence of the systemic reactions (Table 1).⁵

* J. David Talley, M.D., is affiliated with the Division of Cardiology at UAMS Medical Center.

** Mindy D. Boyles, R.N., is affiliated with the Division of Cardiology at UAMS Medical Center.



Figure 1: The fear of contracting an infectious agent has increased the use of gloves, both sterile and unsterile, latex and rubber, in the patient-care environment.

Gloves as a barrier Do gloves provide a protective barrier from infectious agents? Korniewicz and colleagues noted that vinyl gloves were associated with nearly a five-fold increase in perforation and leakage as compared to latex gloves (vinyl: 85% vs. Latex: 18%).⁶ Not all latex gloves are the same; the same study noted a three-fold increase in the perforation rate between private and commercial brands of the gloves. The practice of "double-gloving" decreases the perforation rate of vinyl gloves but provides no additional protection when latex gloves are used.⁷ Gloves used during surgical procedures are more prone to leak than those used in diagnostic procedures.⁸ It is reported that latex gloves may provide better protection against human immunodeficiency virus than other glove types.⁹

Conclusions

Health-care providers are at an increasing occupational risk of an allergic reactions to latex gloves. Hypoallergenic, non-powered gloves decreases the risk of local and systemic immunological reactions. The best barrier against infection is the use of high-quality latex gloves. Frequently changing gloves during prolonged or therapeutic procedures guards against microscopic perforations.

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3. D'Astous J, Drouin MA, Rhine E. Intraoperative anaphylaxis secondary to allergy to latex in children who have spine bifida. Report of two cases. J Bone Joint Surg 1992;74:1084-1086.
4. Arellano R, Bradley J, Sussman G. Prevalence of latex sensitization among hospital physicians occupationally exposed to latex gloves. Anesthesiology 1992;77:905-908.
5. Vandenplas O, Delwiche JP, Depelchin S, Sibille Y, Vandeweyer R, Delaunois L. Latex gloves with a lower protein content reduce bronchial reactions in subjects with occupational asthma caused by latex. Am J Resp Crit Care Med 1995;151:887-891.
6. Korniewicz DM, Kirwin M, Cresci K, Larson E. Leakage of latex and vinyl exam gloves in high and low risk clinical settings. Am Industrial Hygiene Assoc J 1993;54:22-26.
7. Korniewicz DM, Kirwin M, Cresci K, Sing T, Choo TE, Wool M, Larson E. Barrier protection with examination gloves: double versus single. Am J Infect Cont 1994;22:12-15.
8. Baggett FJ, Buirke FJ, Wilson NH. An assessment of the incidence of puncture in gloves when worn for routine operative procedures. Br Dent J 1993;174:412-416.
9. Heller ET, Greer CR. Glove safety: Summary of recent findings and recommendations from health care regulators. South Med J 1995;88: 1093-1 098.

Table 1
Categories of Gloves

Sterile latex gloves	Hypoallergenic latex sterile gloves	Non-Powder non-sterile latex gloves	Regular non-sterile gloves
Baxter, Triflex	Ansell Perry, DermaPrene	Ansell Perry, Dermaclean-Conform	Ansell Perry, Conform-latex
Professional Medical Products, Brown Milled Baxter, Triflex Orthopedic	Baxter, Ultraderm		Becton-Dickinson-vinyl

Manufacturers:

Ansell Perry Inc., Massillon, Ohio
Baxter Healthcare Corporation, Grand Prairie, Texas
Becton-Dickinson, Sparks, Maryland
Professional Medical Products, Irving, Texas



State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Tick, Tock, Tick, Tock: Have You Seen Any Freckles with Legs Recently?

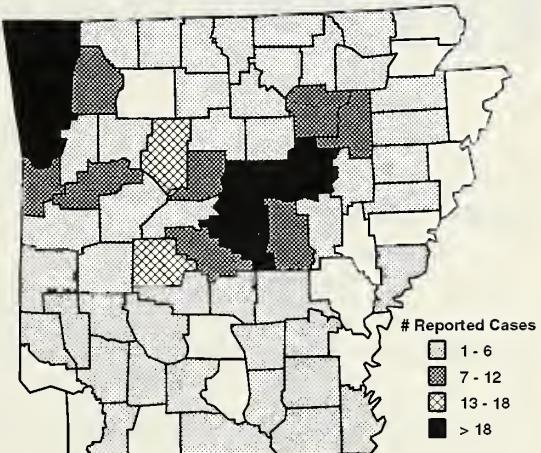
Tickborne diseases are a continuing threat to health in Arkansas, and a diagnostic dilemma for physicians. There are four tickborne diseases recognized as being more or less common in the state, with many cases presenting as fevers of unknown origin. (See Figure 1 for the distribution of reports in Arkansas.) Lyme disease is reported rarely in Arkansas, Rocky Mountain Spotted Fever (RMSF) and tularemia are relatively common, and ehrlichiosis is an emerging infectious disease. (See Figure 2.) Ehrlichia case reporting has only recently been made mandatory in Arkansas, and 29 cases were reported during 1991-1995.

Lyme disease is currently the most frequently reported tickborne disease in the U.S. In 1994, 43 states reported 13,043 cases. Seven states, Mississippi, Hawaii, Alaska, Montana, Arizona, North Dakota, and South Dakota reported no cases; 13 states and Washington D.C. reported 1-10 cases, 14 reported 15-100, and 13 reported 101-500. New York, Connecticut, New Jersey, and Pennsylvania reported over 1,000 cases. The highest rate was reported from Connecticut, 2.030 cases (62 per 100,000). Other rates ranged from 47 in Rhode Island (471 cases) and New York (5,200 cases), to Wisconsin (8) and Minnesota (4.6). Although Oklahoma reported 99 cases (rate=3.0) and Missouri reported 102 (1.9), other surrounding states reported lower rates than Arkansas (0.6). The U. S. rate for 1994 was 3.8 per 100,000 persons.

Lyme disease is less likely to be reported in children in Arkansas than in states where the disease is more common. (See Figure 3.) It is noteworthy that the highest number of Lyme cases are reported in the 20-29 and 70-79 age groups. This is in distinction to tularemia and RMSF, which show generally decreasing rates with advancing age. An exception to this is the higher rate in males in the 30-39 group, which probably reflects increased outdoor activities and consequent tick exposure.

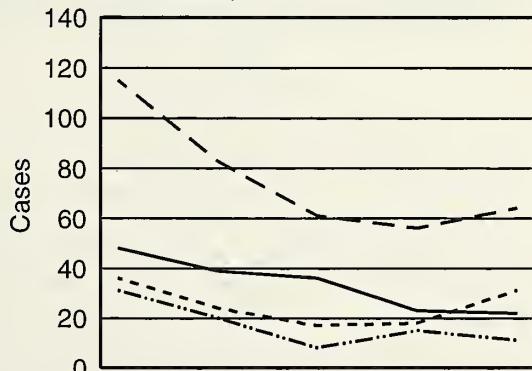
Diagnosis of Lyme disease is problematic in states such as Arkansas where the disease is uncommon. Serologic tests are of low predictive value and are especially insensitive in early stages of the disease. Cross-reacting antibodies may cause false-positive reactions

Figure 1. Reported Cases of Tickborne Diseases in Arkansas, 1991 - 1995*



*Includes Lyme Disease, RMSF and Tularemia

Figure 2. Tickborne Diseases in Arkansas, 1991-1995



Year	1991	1992	1993	1994	1995
Lyme	31	20	8	15	11
RMSF	36	24	17	18	31
Tula	48	39	36	23	22
Total	115	83	61	56	64

Figure 3. Tickborne Diseases in Arkansas, 1991-1995 By Age of Patient

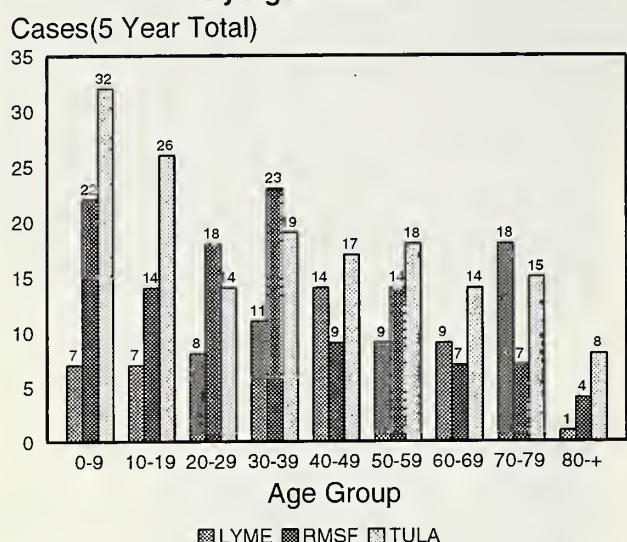
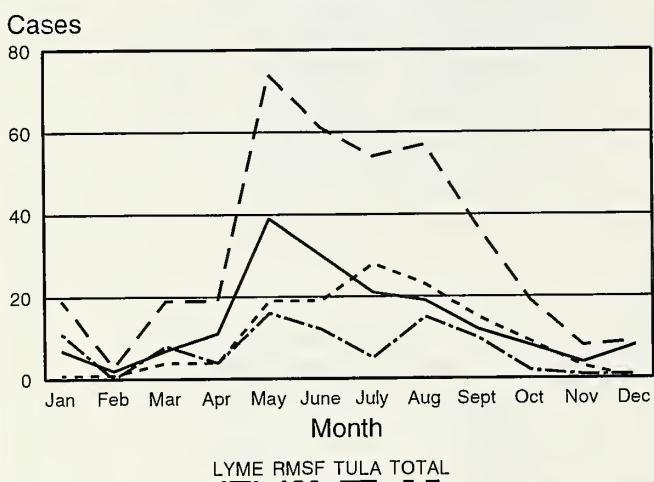


Figure 4. Arkansas Tickborne Diseases By Month of Occurrence 1991-1995



in patients with syphilis, relapsing fever, leptospirosis, HIV infection, RMSF, infectious mononucleosis, lupus or rheumatoid arthritis. Diagnosis should largely be based on clinical findings, with support by ELISA and immunoblotting techniques. The characteristic skin lesion, Erythema Migrans, must reach 5 cm. in diameter for case surveillance purposes. Early systemic symptoms may include malaise, fatigue, fever, headache, stiff neck, myalgia, migratory arthralgias and/or lymphadenopathy, possibly lasting several weeks or more in untreated patients. Later systemic manifestations may include neurologic and cardiac abnormalities, and episodic or chronic arthritis.

RMSF remains the most potentially serious of the

group, with a 5% overall fatality rate. With prompt recognition and treatment, RMSF deaths are uncommon. Risk factors associated with more severe disease and death include delayed antibiotic therapy and patient age over 40 years. Absence or delayed appearance of the typical rash contributes to delay in diagnosis and increased fatality. RMSF caused 6 deaths during 1991-1995.

RMSF is marked by sudden onset of moderate to high fever, malaise, deep muscle pain, severe headache, chills and conjunctival injection. In about half the cases, a maculopapular rash appears on the extremities on about the third day; this soon includes the palms and soles and spreads rapidly too much of the body. Petechiae and hemorrhages are common. Early RMSF may be confused with ehrlichiosis, meningococcemia, and enteroviral infection.

Arkansas continues to report a disproportionate number of tularemia cases. During 1991-1995, 168 (24%) of the U.S. total 700 tularemia cases were reported in Arkansas. Of the 168, 32 (19%) were in the 0-9 year age group. (See Figure 3.) The ulceroglandular form of the disease is most common in Arkansas. Three fatalities were attributed to tularemia in 1991-1995.

The emerging disease, ehrlichiosis, is being recognized and reported more frequently. In Arkansas, the 14 cases reported in 1995 nearly equaled the total (15) reported in the four previous years. Although there is no national reporting requirement, more than 400 cases of monocytic ehrlichiosis (the variant recognized in 1986) and approximately 170 cases of human granulocytic ehrlichiosis (HGE, first seen in 1990) have been reported. The agent of monocytic ehrlichiosis is *Ehrlichia chaffeensis*, and the taxonomic status of the HGE agent is yet to be determined. By rDNA testing, it has been placed closely to *E. equi* and *E. phagocytophilia*, previously recognized animal pathogens. Both forms of ehrlichiosis may interfere with certain immune responses. Opportunistic infections have been observed in serious cases, although the mechanisms of possible immune interference are not known as yet.

The probability of tickborne disease is relatively high in Arkansas, and the summer months in Arkansas bring more opportunities for human exposure to ticks and the possibility of tickborne disease (Figure 4.). The Arkansas Department of Health (ADH) encourages physicians to make use of laboratory tests to diagnose patients with possible cases. The ADH Laboratory offers the immunofluorescent antibody test for RMSF and serologic test for tularemia, and also refers specimens to laboratories at the Centers for Disease Control and Prevention for Lyme disease and ehrlichiosis. Paired acute and convalescent specimens are recommended; often, a single specimen yields a result which does not prove a diagnosis. Specimens should be obtained two to three weeks apart.

Reported Cases of Selected Reportable Diseases in Arkansas

Profile for March 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases March 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	8	30	30	20	152	187
Giardiasis	10	29	29	21	131	126
Shigellosis	9	13	28	38	175	193
Salmonellosis	15	49	36	38	332	534
Hepatitis A	36	149	59	22	663	253
Hepatitis B	9	25	19	14	92	60
HIB	0	0	4	1	6	5
Meningococcal Infections	0	15	15	23	39	55
Viral Meningitis	0	7	2	8	31	62
Lyme Disease	1	3	2	5	9	15
Rocky Mountain Spotted Fever	0	0	0	3	30	18
Tularemia	1	1	1	4	22	23
Measles	0	3	2	1	2	5
Mumps	0	0	3	2	5	7
Rubella	0	1	0	0	0	0
Gonorrhea	375	1211	979	1769	5437	7078
Syphilis	95	235	240	274	1017	1096
Legionellosis	0	0	2	4	5	16
Pertussis	0	3	9	10	60	33
Tuberculosis	16	32	41	33	271	264



Arkansas HIV/AIDS Report

1983-1996

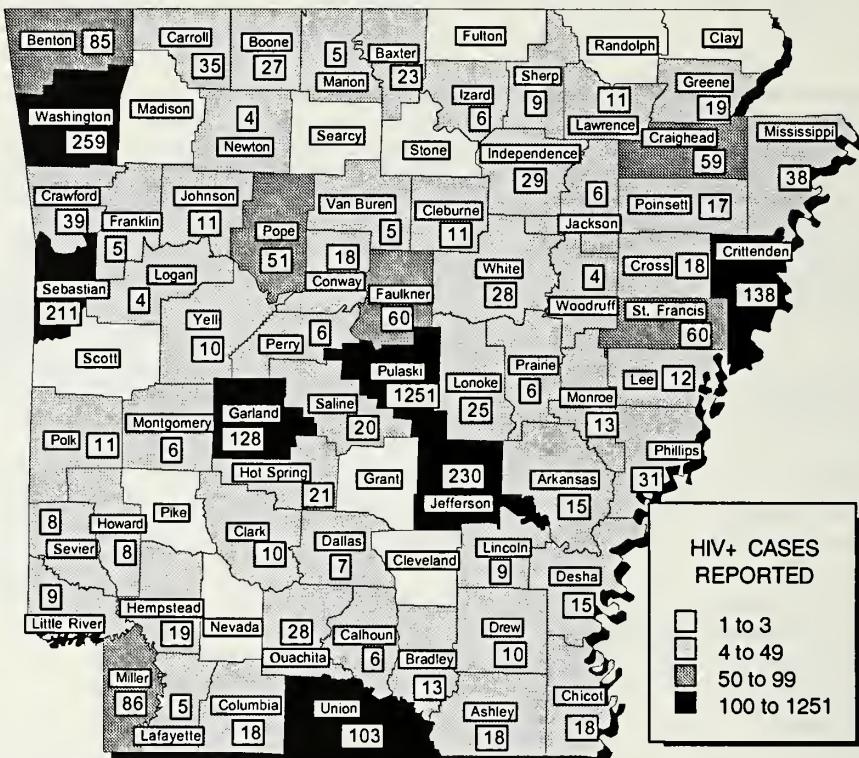
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



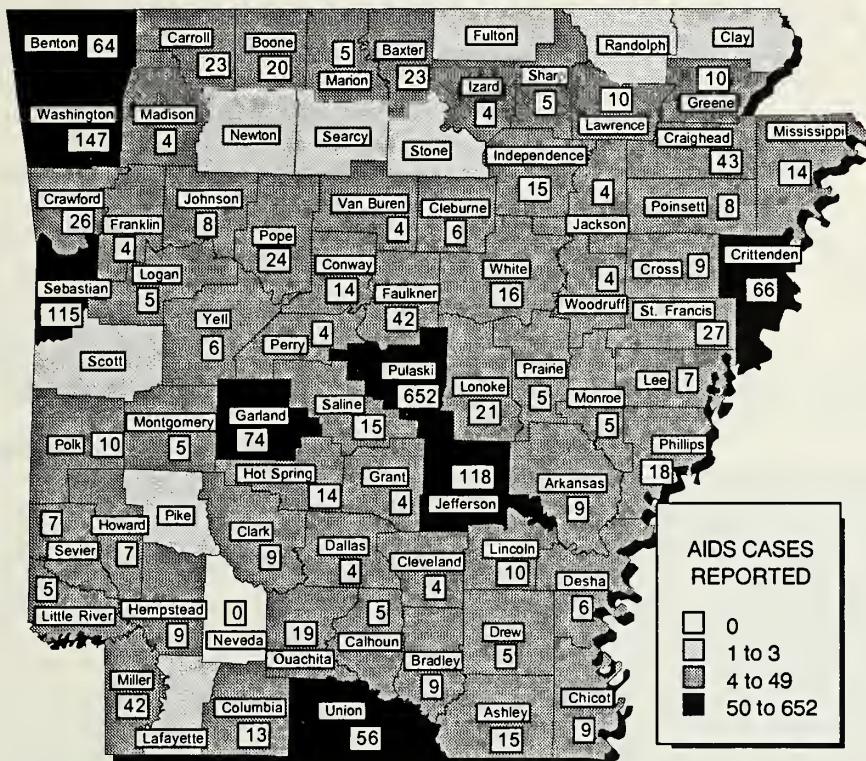
County of residence at the time of test for the 3,545 Arkansans reported to be HIV+. (4/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	100	215	248	413	400	392	352	367	337	109	2,933	83
	Female	8	26	37	68	85	81	94	90	92	31	612	17
A G E	Under 5	1	1	2	8	13	6	3	7	2	0	43	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	12	130	4
	20-24	12	40	52	71	44	49	64	60	47	13	452	13
	25-29	21	70	71	112	105	107	111	85	78	31	791	22
	30-34	25	50	64	116	120	111	91	102	101	23	803	23
	35-39	19	36	40	80	88	68	77	69	81	28	586	17
	40-44	16	17	17	43	50	41	47	50	46	11	338	10
	45-49	6	8	18	13	20	26	18	27	24	5	165	5
	50-54	2	1	5	8	14	14	10	12	17	7	90	3
	55-59	1	3	4	6	3	13	6	7	5	6	54	2
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	3	36	1
R A C E	White	87	170	174	328	298	293	278	259	260	72	2,219	63
	Black	21	69	108	151	184	173	163	184	159	61	1,273	36
	Hispanic	0	1	3	1	3	4	1	7	3	2	25	1
	Other/Unknown	0	1	0	1	0	3	4	7	7	5	28	1
R I S K	Male/Male Sex	64	137	140	243	246	260	242	229	156	38	1,755	50
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	48	6	526	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	25	8	244	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	93	56	14	510	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	35	41	23	12	7	29	137	74	379	11
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	140	3,545	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,545 Arkansans reported to be HIV+, 1,988 have been diagnosed with AIDS. (4/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	76	1,729	87
	Female	5	6	10	20	25	35	64	42	36	16	259	13
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	0	17	1
	20-24	7	5	11	11	14	14	31	22	11	4	130	7
	25-29	24	22	13	44	43	67	78	45	47	13	396	20
	30-34	20	21	21	47	42	73	98	81	75	28	506	25
	35-39	19	15	20	31	38	55	80	52	49	20	379	19
	40-44	10	7	4	21	35	28	49	39	35	14	242	12
	45-49	5	3	3	14	6	24	28	22	17	4	126	6
	50-54	1	1	2	5	6	7	10	12	15	2	61	3
	55-59	2	2	4	1	4	8	8	5	6	4	44	2
	60-64	1	1	1	1	1	2	6	10	5	0	28	1
	65 and older	1	4	0	4	2	2	3	3	9	3	31	2
R A C E	White	74	61	58	141	134	206	273	190	174	55	1,366	69
	Black	16	20	21	47	66	75	121	102	97	35	600	30
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	165	132	35	1,158	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	45	4	284	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	7	161	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	32	5	192	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	1	35	2
	Undetermined	0	2	1	3	1	2	2	9	32	39	91	5
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	92	1,988	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

DERMOTT

Zangari, Maurizio, Internal Medicine/Hematology. Medical Education, University Padova Italy, 1980. Residency, Wyckoff Medical Center, New York, 1990. Board certified.

EUDORA

Gregory, Jo Anne, Family Practice. Medical Education, Meharry Medical College, Nashville, Tennessee, 1992. Residency, UAH Family Practice, Huntsville, Alabama, 1995. Board certified.

HARRISON

Clary, Cathy J., Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC Northwest, 1994/1996.

HOT SPRINGS

Vasudevan, Padmini, Neurology. Medical Education, University of Delhi, India, 1972. Internship/Residency, M.A. Medical College & Associated Hospital, 1971/1975.

LITTLE ROCK

Andrews, Nancy Rai, Obstetrics & Gynecology. Medical Education, Meharry Medical College, Nashville, Tennessee, 1990. Internship, Meharry Medical College, 1990. Residency, University of Arkansas, 1994.

Christy, George William, Cardiovascular Diseases. Medical Education, Loyola University Stritch School of Medicine, Maywood, Illinois, 1985. Internship, Emory University School of Medicine, 1986. Residency, Emory University Hospital, 1988. Board certified.

Fitzgerald, Amy J., Internal Medicine. Medical Education, Louisiana State University School of Medicine, Shreveport, 1992. Internship, Louisiana State University Medical Center, 1993. Residency, UAMS, 1995. Board certified.

POCAHONTAS

Landis, Mark A., Family Practice. Medical Education, East Tennessee State University, Johnson City, 1994. Residency, AHEC Northeast, 1994. Board certified.

OUT OF STATE

Meredith, Paul Drew, General Practice. Medical Education, UAMS, 1973. Internship/Residency, UAMS, 1974/1976. Board certified.

RESIDENTS

Baho, Najla J. Medical Education, University of Aleppo, Syria, 1990.

Bean, Paul Edward, Internal Medicine. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Brown, Robert D., Medical Education, UAMS, 1992.

Burke, Charles Thomas, Medical Education, UAMS, 1996. Internship, UAMS.

Calhoun, Aris Jeannette, Family Medicine. Medical Education, UAMS, 1996. Internship, Louisiana State University, Shreveport.

Clark, Teresa M., Emergency Medicine. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Dickson, Brian Glenn, Medical Education, UAMS, 1996. Internship, UAMS, 1997.

Dugger, Joseph Scott, Family Practice. Medical Education, UAMS, 1996. Internship/Residency, AHEC Northeast.

Elliot, Jana Crain, Internal Medicine/Pediatrics. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Hart, Susan K., Family Practice. Medical Education, UAMS, 1996. Internship/Residency, AHEC Northwest.

Houston, Melinda Lee, Pediatrics. Medical Education, UAMS, 1996. Internship, UAMS.

Jetton, Christina Ann, Radiology. Medical Education, UAMS, 1996. Residency, UAMS.

Lowery, Lisa Ann, Internal Medicine. Medical Education, UAMS, 1996. Residency, UAMS.

Lucas, Shauna Lee, Family Practice. Medical Education, UAMS, 1996. Residency, AHEC Fort Smith.

McKelvey, Kent D., Family Medicine. Medical Education, UAMS, 1996. Internship/Residency, AHEC Southwest.

Merchant, Rhonda J., Pediatrics. Medical Education, UAMS, 1996. Residency, UAMS.

Russell, Shelley White, Internal Medicine/Dermatology. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Shoppach, Jon Paul, Radiology. Medical Education, UAMS, 1996. Residency, UAMS.

Slay, David R., Medical Education, UAMS, 1996. Internship, UAMS.

Stewart, Jason Garner, Orthopedic Surgery. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Tharp, Paul S., Medical Education, UAMS, 1996. Internship, UAMS. Residency, Stanford, Palo Alto, California.

Thrasher, James Randall, Internal Medicine. Medical Education, UAMS, 1996. Residency, UAMS.

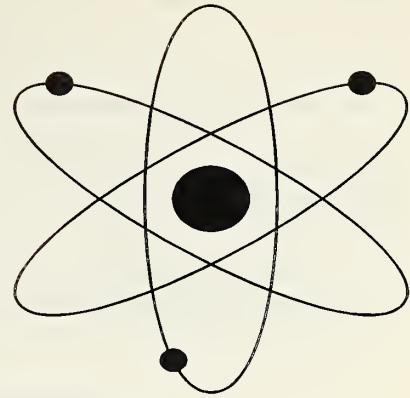
Webber, John Charles, Psychiatry. Medical Education, UAMS, 1996. Residency, UAMS.

Whiteside, Thomas Fletcher, Pathology. Medical Education, UAMS, 1996. Internship, UAMS.

Zelk, Misty Michelle, Medical Education, UAMS, 1996. Residency, UAMS.

Radiological Case of the Month

Joseph S. Murphy, M.D.
Steven R. Nokes, M.D.



History:

A 45-year-old female was referred for a stereotactic needle biopsy of a mass seen in the medial aspect of the right breast seen only on the craniocaudal view (arrow in figure 1). What is the most likely diagnosis?



Figure 1A and 1B: Mediolateral (top) and craniocaudal (bottom) mammograms.

Sternalis Muscle

Diagnosis:

Sternalis muscle.

Radiographic Findings:

On the craniocaudal view a 1.5 cm density is seen far medially. A CT scan was performed (figure 2) which reveals an asymmetric sternalis muscle (arrow) separated by fat from the pectoralis major muscle.

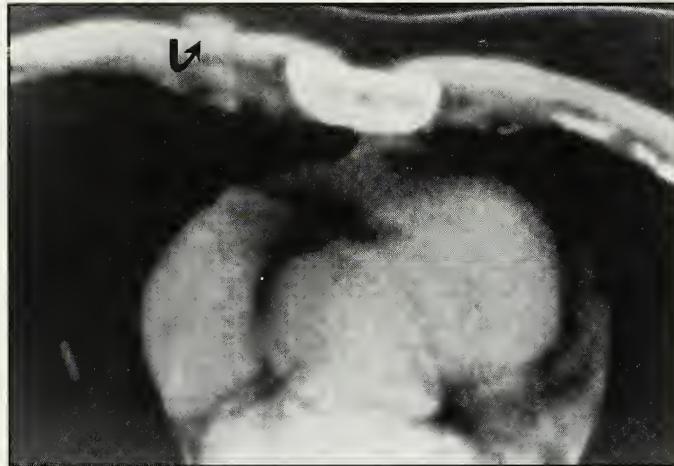


Figure 2: Axial CT scan of the chest.

Discussion:

The sternalis muscle is an anatomic variant that occurs in approximately 8% of both men and women and is often unilateral. It runs longitudinally along the medial border of the sternum and is of uncertain teleology and function. A fat plane separates it from the pectoralis major muscle.

Recent efforts to improve mammography by the American College of Radiology have led to improved positioning and inclusion of more breast tissue, particularly posterior and medial on the craniocaudal view. With proper elevation of the inframammary fold, the pectoralis major muscle should be seen on approximately 30% of craniocaudal images. This technique will also increase visualization of the sternalis muscle.

It is important to recognize this inconstant benign variant, most often seen on craniocaudal mammograms, to avoid an unnecessary recall, follow-up exam or biopsy.

References:

1. Bradley FM, Hoover HC, Hulka CA, et al. The sternalis muscle: an unusual normal finding seen on mammography. AJR 1996, 166:33-36.
2. American College of Radiology. Mammography quality control manuals. Reston, VA: American College of Radiology, 1994.
3. Eklund GW, Cardenoza GC. The art of mammographic positioning. Radiol Clin North Am 1992;30:21-53.

Authors:

Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

Contributor: Joseph S. Murphy, M.D. is associated with Radiology Consultants in Little Rock.

Things To Come

September 6 - 7

3rd Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington Univ. School of Medicine. For more information, call 1-800-325-9862.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

October 17 - 19

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

November 1 - 3

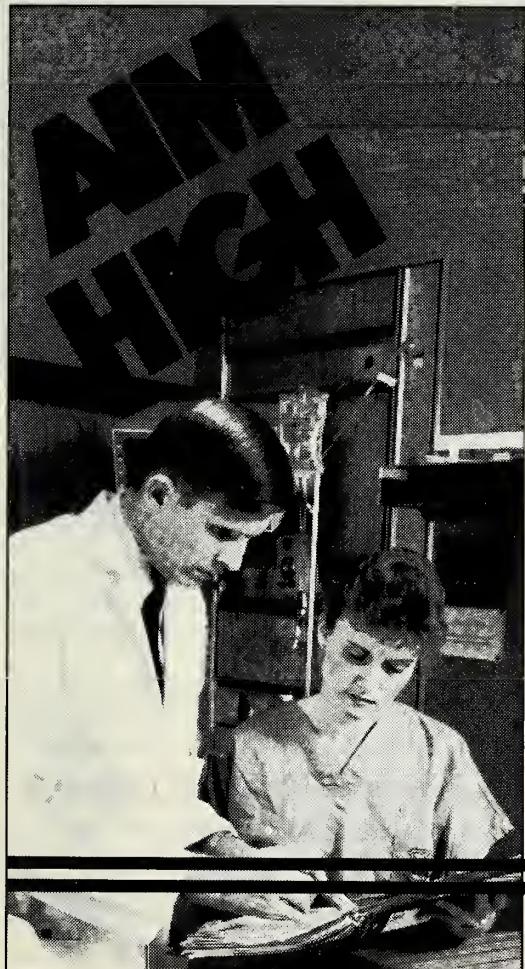
New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.



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Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293
Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room 3 times a month, CARTI Auditorium once a month
LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuroradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109

VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

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Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

*Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
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Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
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Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
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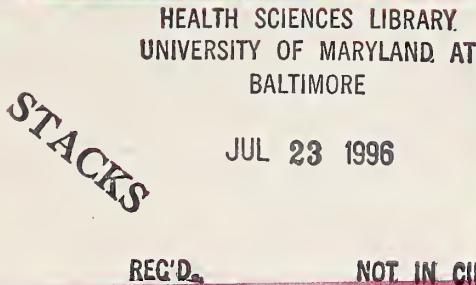
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 2

July 1996



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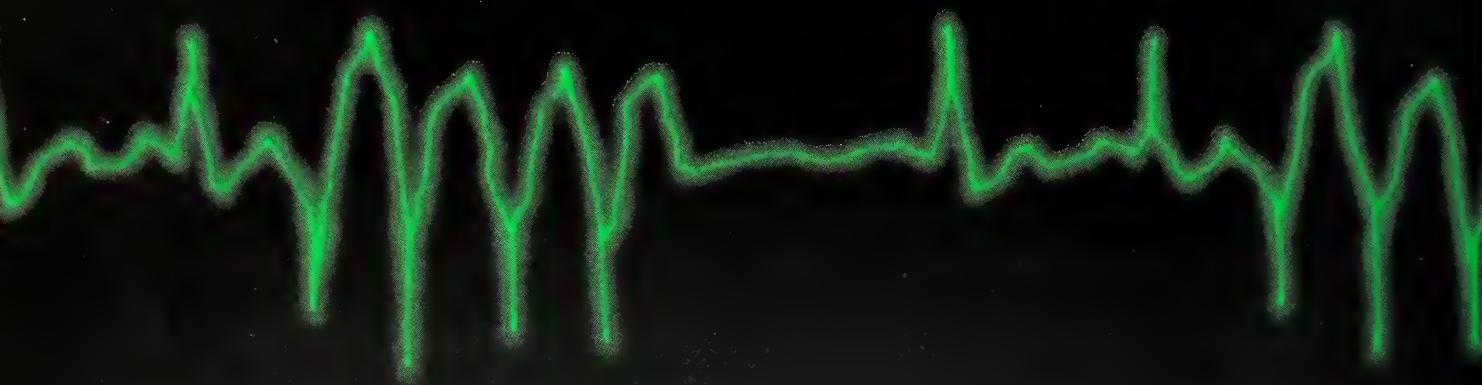
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 2

July 1996

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The News and Weather Report: *Bad Moon Rising and Ill Winds Blowing*

Lee Abel, M.D.*

I once read a curious fact about the human heart. The human heart (referring to the metaphysical organ, not the pump) can hold fear or love but not both at the same time. When we are feeling love and its attendant emotions of happiness, forgiveness and trust, we are unable to experience fear and its attendant emotions of anger, suspicion and mistrust.

These thoughts were occasioned by a patient of mine - a middle aged woman with high blood pressure, anxiety and panic attacks. Though I believed my diagnoses were correct and my choice of medications reasonable, she did not have the improvement I had hoped for. There developed a pattern to her office visits. She would begin by telling me her various symptoms, but then would also tell me how upset she was about something she had seen on the local TV news. Often I had only minimal or no knowledge of the child kidnapping or other tragedy that she was so distraught over. I finally asked her why she faithfully watched the news every night, given how much it upset her. She replied that she felt she should watch it because it was "reality," and that to not do so would be a sign of weakness.

The local TV news does show us one aspect of reality. We are shown traffic jams, car wrecks and overturned trucks; fires, floods and explosions; shootings, drug busts, murders and other examples of the heinous behavior we humans are capable of inflicting on ourselves and on others. It only takes watching for about a week to know the routine. The chosen mayhem is predictable and the presentation is flashy but quite formulaic. In fact, a week of the local news in any city is sufficient, because it is remarkably homogeneous across the nation. The triple murder will receive more coverage than the single homicide unless the single homicide has some hint of juicy scandal, and then it will take precedence over mere numbers. Some stations may adopt a raw in-your-face tabloid style, while others claim a kinder gentler style. For all the stations' assertions of seeing (or as Channel 11 claims, "feeling") a difference, they are all dancing to

the same tune.

The TV news approach to reality is well seen even in their coverage of the weather. The weather features prominently on the local news perhaps because it is such an easy way to fill up time. Some of their coverage is merely banal. A storm topples a tree onto someone's house. The attractive TV personality shoves a microphone into the hapless homeowner's face and earnestly asks, "How does it feel to have a large tree on top of all your worldly possessions?"

Some of their weather coverage takes on a dark and ominous tone marked by a good dose of hype (but the weatherperson is always very friendly and nice). The emphasis is on storms or difficult weather that may come about, the severity and danger of the present conditions and on what can best be called the weather related body count. Though nature is powerful and must be respected, some people seem to have lost sight of how adaptable humans are. I have patients who seem to have been persuaded that Arkansas is a truly hostile environment. We are told the numbers - the wind chill, the pollution index, the pollen count, the UV index and the heat index. If this information causes a "batten down the hatches" mentality, we increase our isolation from others and from the beauty of the natural world. A more peaceful and informative way to know the weather is to get up from the La-z-boy (glance at the weather map in the newspaper if you must) and take a walk.

We do need to stay connected to what is happening in our local communities. Apathy and ignorance are roadblocks to a better community. A friend recently reminded me that we usually get the government we deserve. The TV news with its focus on the superficial does not contribute to the deeper understanding we need. It gives us too much mindless chatter and information clutter. Their take on reality is too colored by fearmongering and sensationalism which is intended to keep viewership (and advertising rates) up. The newspapers are not free of these traits, but one is given more substance in a more efficient manner, and the format leaves the consumer with more control.

Local TV news programs have made attempts to be more positive, but this often takes the form of gos-

* Dr. Abel specializes in internal medicine and is affiliated with the Little Rock Diagnostic Clinic. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

sipy celebrity fluff or maudlin human interest stories. They profess to give us "news you can use" but their attempts seem largely hollow and off key. For example, Channel 11 recently ran an ad touting "11 Reasons to Watch News Channel 11." These reasons included (exact quotes): 1) Your child is missing! What do you do? We have the information you need to know; 2) You trust your doctor, but do you really know him? Find out how to check out your physician; 3) Doppler 11 Radar. Tracking storms as quickly as they form; 4) How do you become Miss Universe? Find out what it takes to win the crown; and my favorite (for its complete unawareness of the irony): 5) Is junk mail taking over your mailbox? Larry Audas shows you how to get off all those mailing lists. (As if, the advertisers who sponsor the TV news are somehow different from the ones who send us mail. The biggest source of junk advertising in the typical U.S. household is the kind that arrives blaring from the tube, not the kind that silently fills up the mailbox.)

My intention is not to demonize the local TV news. The truth is, we are attracted to the lurid. This being so, the media will continue to give us the grisly details. It is also true however, that we have a side that is attracted to the inspiring and uplifting. All of us get to choose how much time we spend on the lurid and inane versus how much time we spend on the more

meaningful. Is the TV version of reality the one our children need to see each evening? If the local news makes us feel more fearful, more distrustful of our neighbors, if it makes us feel more negative, cynical and passive, then can it be healthy for our metaphysical heart or our beating heart?

The late Methodist minister, Dr. James B. Argue, said that although we may pray for blessings, we often don't recognize them when they occur. Things that we fervently pray for may prove disastrous, while things that seem a setback, may later reveal themselves to have been quite the opposite. Our individual vision is limited. We are indeed the proverbial blind men feeling only a part of the elephant, and so humility is in order.

There is a deep mystery to life; good can sometimes come from bad. The bad moon and the ill winds can give rise to the generous sun and the cool breeze. Still, for my patients facing challenging medical problems, I will advise that they take care with the images they plant in their minds. Healing sometimes requires more than the correct pill or timely surgery, so I will try to remember that love and laughter can be powerful medicine. The TV news won't make the prescription list.

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This August trip provides superior fishing for huge brown trout. The picture is of Alan Storeygard, M.D., of Jacksonville from our May 1996 Montana trip with 12 doctors. Everyone caught many 10 to 12 pound rainbow trout. In August, you will experience unbelievable brown trout fishing with superior guides in one of America's most beautiful settings. The trip is limited to 12 people, so book today.

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Medicine in the News

Health Care Access Foundation

As of June 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,092 medically indigent persons, received 20,246 applications and enrolled 39,895 persons. This program has 1,711 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Thunderstorm-Associated Asthma: An Unusual Epidemic

The increased incidence of asthma in recent years has raised the possibility that certain environmental conditions may precipitate attacks. Periodic reports of outbreaks after thunderstorms have heightened this suspicion. Two reports on a large London outbreak that happened after a major thunderstorm in June 1994 allow a more extensive look at the phenomenon.

The first study characterized the patients involved in the outbreak. During the 30 hours after the storm, 640 people visited London emergency rooms for asthma or other airway disease - 10 times the expected level. Among these, 403 had a history of hay fever and 283 had no prior history of asthma attacks. Grass pollen counts were exceptionally high during the two days before the outbreak.

The second study characterized the environmental conditions around the time of the outbreak. Two major changes occurred right before the outbreak: a drop in air temperature and a rise in grass pollen counts. During other times in the two months before and after the outbreak, nonepidemic asthma was significantly associated with the number of lightning strikes, increased humidity of sulfur dioxide concentrations, a temperature drop or high rainfall the previous day and a decrease in maximum air pressure or changes in grass pollen concentrations over the previous two days.

Comment: An accompanying editorial supports the conclusions of these two papers: epidemic asthma after a thunderstorm is a unique entity, probably related to marked increases in grass pollen concentrations, which may affect a population that doesn't usually suffer from asthma. - KI Marton

Thames Regions Accident and Emergency Trainees Association. A major outbreak of asthma associated with a thunderstorm: experience of accident and emergency departments and patients' characteristics. BMJ 1996 Mar 9; 312:601-4.

Celenza A; et al. Thunderstorm associated asthma: a detailed analysis of environmental factors. BMJ 1996 Mar 9; 312:604-7.

Bauman A. *Asthma associated with thunderstorms: grass pollen and the fall in temperature seem to be to blame. BMJ 1996 Mar 9; 312:590-1.*

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Reading Mammograms Twice Makes a Difference

The optimal strategy for interpreting mammograms is uncertain. This British study of 33,734 women compared three methods: a single reading by one radiologist; consensus double reading (by two radiologists who either agreed about whether to recall the patient for further examination or followed the recommendation of a senior radiologist); or non-consensus double reading (by two radiologists, either of whom could recall the patient if they disagreed). In actuality, the consensus double reading method was applied to all the women, but the researchers inferred recall rates for the other two strategies based on the radiologists' individual recommendations.

The single-reading method would have detected 71 cancers per 10,000 women, compared with 80 for non-consensus double reading. The proportion of women recalled for further assessment was higher with non-consensus double reading (9.9%) than with single reading (6.9%) or consensus double reading (4.2%). Compared with single reading, consensus double reading saved roughly \$7,300 per 10,000 women screened, while non-consensus double reading cost about \$29,000 more per 10,000 women.

Comment: Consensus double reading of mammograms clearly dominated in this study, detecting at least as many cancers as the other two strategies but costing the least. - KI Marton

Brown J; et al. *Mammography screening: an incremental cost effectiveness analysis of double versus single reading of mammograms. BMJ 1996 Mar 30; 312:809-12.*

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Physicians' Perceptions of Their Role in Health Promotion

In 1981, researchers surveyed primary care physicians in Massachusetts about their perceived role in health promotion. The same team now presents the findings of a similar survey done in 1994. Most physicians believed that eliminating smoking, avoiding illicit drugs, using seat belts and limiting alcohol and saturated-fat intake were "very important" for patients;

more physicians in 1994 than in 1981 rated each behavior as very important. However, fewer physicians in 1994 believed that avoiding excess calories and eating a balanced diet were very important.

From 1981 to 1994, an increasing number of physicians saw educating patients about risk factors and helping patients follow health regimens as part of their role. But ironically, fewer physicians in 1994 considered it their responsibility to provide patients with emotional support, to encourage them to discuss personal problems, to educate them about community resources and to involve family members in their care.

Comment: Educating and counseling patients about health promotion requires considerable time, effort and skill. One can only wonder whether the physicians' perception of less responsibility for certain types of personal counseling in 1994 is a response to time pressures and limited reimbursement under new health care arrangements. - AS Brett

Wechsler H; et al. *The physician's role in health promotion revisited - a survey of primary care practitioners.* N Engl J Med 1996 Apr 11; 334:996-8.

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Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your office.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: May 8, 1996

*Bradley Phillips Middleton, LPN 27603 (Mabelvale) Permission to renew license granted with 2-year probation

*Cynthia Lou Pate Cross, RN 31050 (Ft. Smith) Probation - 3 years

*Kevin George Howell, LPN 31822 (Jacksonville, NC) Suspended until North Carolina license has been cleared

*Leslie Anne Haralson, Impostor (Ft. Smith/Fayetteville) Fined \$5,000

*Susan Rita Glasscock, RN 33549 (Baptist Health, Little Rock) Suspension - 2 years

*Terrie Carol Martin Heard, LPN 29150 (Homer, LA) Suspension - 3 years

VOLUNTARY SURRENDER:

*Mary Ellen Hankins, RN 12394 (DeQueen) April 16

*Earl LeRoy Goodhart, Jr., LPN 29490 (Farmington) April 17

OFF PROBATION:

*Amanda N. Gilliam, RN 43730 (Texarkana, TX) April 29

*Rose M. Langley, LPN 19840 (Mayflower) April 25

*Robert Hal Bodenhamer, RN 16272 (Mt. Home) May 3

LETTER OF REPRIMAND:

*Debra June Williams Honey, RN 33793 (Newport) April 22

*Cynthia Ann Wilkerson Dunseath, LPN 13170 (Conway) April 23

*Jane Kay Jones Keck, LPN 26787 (Batesville) April 23

*Debby Kay McCune Worden, LPN 31542 (DeQueen) April 24

*Norman Willis Whitten, LPN 29372 (Bearden) April 24

*Carla Jeannine Blanchard Unger, LPN 16823 (Flippin) April 24

*Cindy Paige Gardner Limbaugh, LPN 27878 (Sulphur Rock) April 24

*Mary R. Swearingen Everett, LPN 14824 (Springdale) April 23

*Cindy Gayle Champion Barton, LPN 32596 (Conway) April 23

*Lillian Ann Stone Coke, LPN 6580 (Hot Springs) April 23

*Melna Jean Aaron Berryman, LPTN 1251 (Benton) April 24

*Tiffany Lynn Oliver, LPN 30207 (Nashville) April 24

*JoAnn Rhodes, RN 25246 (Muldrum, OK) April 24

REINSTATEMENT:

*Suellen West Wooten, RN 28075 (Jonesboro) April 24

*Frances Kay Christopher, RN 24838 (Sallisaw, OK) April 25

ALERT:

If you have employed the following nurse or have any knowledge of her whereabouts, please notify the Board of Nursing at (501)686-2700:

*Carolyn Joyce Vann Hayden, LPN 25559

Testing 1, 2, 3.

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Assistant, Blood Bank; Ruth Ready, Medical Technologist, Evenings; (*front row, from left*) Linda Andries, Assistant Administrative Lab Director; Stacey McVey, Medical Technologist, Hematology; Andrea Pfeifer, CLSp, Cytogenetics; Peggy Casey, Medical Technologist, Immunology/Histology; LaTonia Shelton, Medical Lab Technician, Chemistry; Cindy Weaver, Medical Technologist, Microbiology and Delores Ware, Lab Assistant, Receiving.

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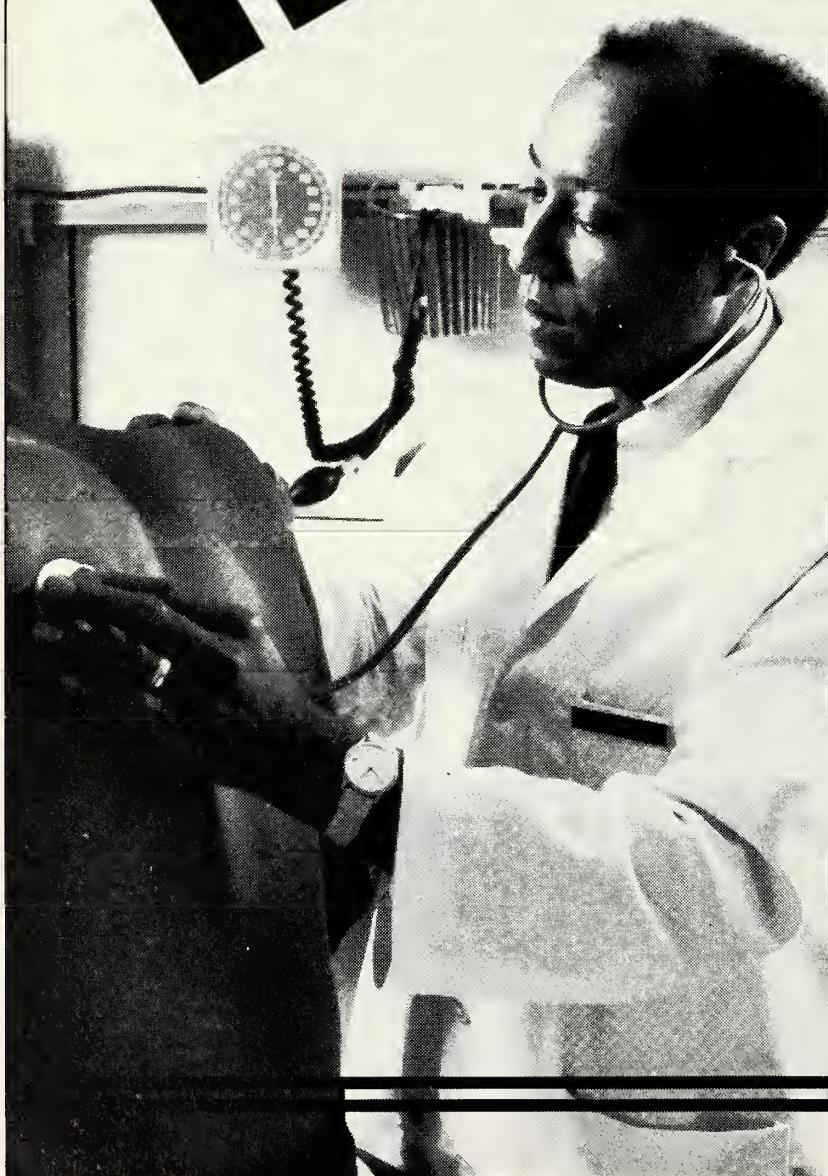
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AMS Newsmakers

Dr. Les Anderson, a family practitioner, was recently honored as the 1996 Citizen of the Year during the Lonoke Chamber of Commerce banquet.

The office of Dr. Ronald Ganelli, a surgeon, recently joined the Wynne Chamber of Commerce. Mark Taylor (on the left) of the Chamber presented Dr. Ganelli with a membership plaque.



Ronald Ganelli, M.D.

Dr. John Lytle, a Pine Bluff orthopedic surgeon, recently spoke during a session of "The Doctor Is In" at The Arts & Science Center. His discussion on sports medicine was titled "Don't Take Me Out of the Ball Game."



Charles Tucker, M.D.

Dr. Charles Tucker, a family practitioner of Ash Flat, was recently recognized by the Sharp County and quorum court members for his many years of commitment to the county. He has been practicing medicine for more than 28 years.

Drs. James D. Mashburn and Arthur F. Moore were recently named recipients of the 1996 Eagle Award given by Washington Regional Medical Foundation for their outstanding health leadership in Northwest Arkansas.

Arkansas Health Care Access Foundation (AHCAF), Inc. was recently honored as the group winner of the JCPenney Golden Rule Award for the Central Arkansas area. In addition, AHCAF was named a semi-finalist in the River Valley area of Russellville and received \$250. As the group winner, AHCAF re-

ceived \$1,000, a crystal flame award and automatic entrance into the national JCPenney 1996 Golden Rule Award competition. These awards are presented each year to seven volunteers or groups of volunteers who exemplify outstanding community service.



(From left) Pat Keller, Project Director of the Arkansas Health Care Access Foundation, with Betty Bumpers at the JCPenney Golden Awards Banquet in Russellville.



Pat Keller, Project Director of the Arkansas Health Care Access Foundation, accepting the award at the JCPenney Golden Awards Banquet in Russellville.

Christopher Adams, Little Rock; Lester T. Alexander, Pine Bluff; Ron William Beckel, Little Rock; Elizabeth Ross Chambers, Harrison; Jay Douglas Holland, Little Rock; Matthew Kyle McAlister, Mountain Home; Robert Lyle Morris, Harrison; Debra Jo Morrison, Little Rock; Mose Smith, Little Rock; Aubrey Lawrence Travis, Van Buren.



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B is for Ball,

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Danny Thomas, Founder

New Member Profile



Erik Jon Wait, M.D.



PROFESSIONAL INFORMATION

Specialty: Obstetrics & Gynecology

Years in Practice: One

Office: Malvern

Medical School: University of South Dakota, Vermillion, 1991.

Internship: University of Missouri, Columbia, 1992

Residency: University of Missouri, Columbia, 1995

Business and other affiliates: First United Methodist Church, AMA and Rotary

Honors/Awards: AOA, Teaching Excellence Award in Residency and a Medical Publication Award.

PERSONAL INFORMATION

Children: Brittni, 8; Devin, 5; and Ava, 3

Date/Place of Birth: June 2, 1963 - Sioux Falls, S.D.

Hobbies: weight lifting, mountain bike riding, archery and motorcycles

THOUGHTS

Favorite junk food: pizza

People who knew me in medical school, thought I was: good-natured, even-tempered and funny.

Favorite vacation spot: Caribbean (St. Thomas)

One goal I am proud to have reached: finishing residency

Favorite childhood memory: sailing with my father

When I was a child, I wanted to grow up to be: a physician

First job: sacking race horse oats at age 14

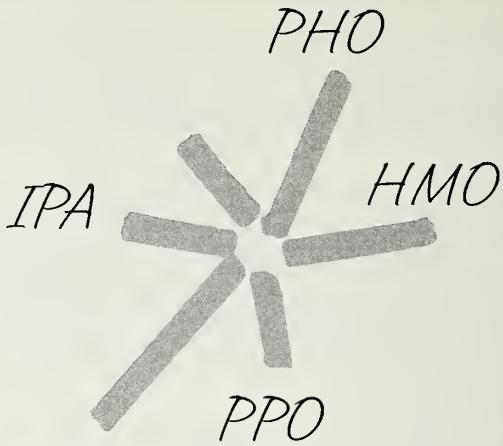
Worst job: sacking race horse oats at age 14

My life philosophy: Enjoy!

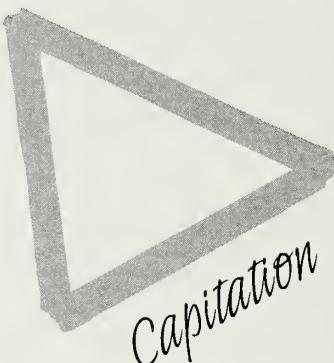
If you are interested in appearing in either the *New Member Profile* or *Member Profile*, contact Tina Wade at the Arkansas Medical Society at (501) 224-8967 or 1-800-542-1058.



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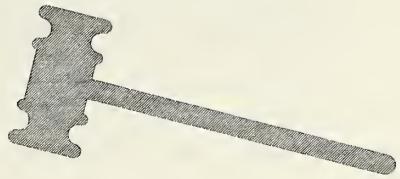
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Basic Rules of Being an Expert Witness



David L. Ivers, J.D.*

Most doctors would rather do just about anything than be a witness in court. It's tedious, time consuming and you have to put up with all those obnoxious attorneys. But love it or hate it, most physicians probably will end up in the hot seat sometime during their career, often repeatedly. Following are some basic rules of thumb for those auspicious occasions.

Types of Witnesses

You could be involved in a lawsuit as an ordinary lay witness, such as someone who has observed an automobile accident. However, as a physician, if you are called as a witness, odds are it will be as an expert.

Basically, there are two kinds of expert witnesses. One is a "hands-on" or fact expert. In this role, you have actually been a part of events that transpired in the case. An obvious example is a physician who treated the plaintiff in a car wreck case. The second type of expert is the paid consultant, a nonfact expert who is highly qualified in his or her field and has been hired specifically to testify in this case.

Where You Will Testify

You will either testify on the witness stand in the courtroom or in a deposition in an attorney's office. Don't be fooled. A deposition is just as important as live testimony in the courtroom.

A deposition is designed to allow the opposing counsel to determine what your testimony is going to be in court, what evidence you are relying on, how you drew your conclusions, and similar matters. During a deposition you are under oath and your testimony is recorded, just as if you were in court. If you later change your testimony in court, your deposition will be used to point out the discrepancies, i.e. to "impeach" you.

Also, it is common practice these days for experts to give two depositions, the discovery deposition and then an "evidentiary deposition." The evidentiary deposition is often on videotape. The video is then played at the trial, and the physician does not actually have to come to court.

Your Qualifications

Typically, the attorney who calls you will first have you introduce yourself and briefly explain why you are testifying. The attorney then will likely question you about your qualifications. The attorney calling you has to establish that you have the requisite "knowledge, skill, experience, training, or education" under Rule 702 of the Arkansas or Federal Rules of Evidence to qualify as an expert.

The attorney will probably insist that you give your qualifications, even if the other side says it is not necessary. But don't go overboard. A good attorney will take you down a path that is impressive, but sticks to qualifications pertinent to the issue at hand, and does not become flagrant boasting that irritates the jury. Also, the attorney may choose to weave in your qualifications at relevant points during your testimony instead of using a shotgun approach at the beginning.

The Type of Testimony You Will Give

The type of testimony you will give obviously depends upon whether you are a fact witness or a hired expert. Generally, though, under Rule 702, anything that "will assist the trier of fact to understand the evidence or to determine a fact in issue" is fair game. That leaves wide latitude for questioning under either category of witness.

After your qualifications, you will usually state your conclusions and then go into some detail about the underlying bases for those conclusions. In the past there were concerns with the frequent situation

* David L. Ivers, J.D., is an associate with Mitchell, Blackstock and Barnes in Little Rock, general counsel for the AMS.

in which experts based their opinions on what they learned from other persons, which created a hearsay problem. However, in recent years, the law has finally recognized this process as the legitimate and realistic way in which experts function in everyday life. Therefore, under Rule 703, if the evidence is of a type "reasonably relied upon by experts in the particular field in forming opinions or inferences on the subject, the facts or data need not be admissible in evidence."

As a simplified example, this means that you can testify as to why you believe that the patient was overdosed at the hospital, even if part of your basis for this opinion is the nurse's charts instead of first-hand observation of the excess drug being administered. You can also rely on articles and treatises in your field, studies conducted by other experts and similar sources.

The "Ultimate Issue" and "Magic Words"

A long-running debate in legal circles has focused on whether experts should be able to testify as to the "ultimate issue" in a case. Through Rule 704, it is now permissible for experts to give an opinion even if it goes to the very question the jury is to decide, e.g., did the automobile accident cause the herniated disc? The only exception is that the Rules do not allow experts to testify to the mental conditions of defendants in criminal cases.

The Rules also have done away with the requirement for certain "magic words" in expert testimony, but attorneys today still frequently use them. Typically, after background discussion the questioning goes like this:

Q: On the basis of this information, do you have an opinion *to a reasonable degree of medical certainty* as to the cause of Mr. Pain's condition?

A: I have an opinion.

Q: What is that opinion?

And so on. Technically, there is no requirement that your opinion have any more stringent proof requirement than other evidence, usually a mere probability ("preponderance of the evidence"). Nevertheless, you will still be asked this type of question in many cases, and for all practical purposes, it rarely poses a problem for experts.

In conjunction with the magic words, many attorneys will ask you a long, detailed "hypothetical question." This device was originally designed to avoid problems with non-fact witnesses testifying based on facts of which they had no personal knowledge. Thus, a hypothetical question with all the same facts was created.

While use of the hypothetical question is no longer necessary under the Rules, it is often a useful tool, and the attorney who uses it should give the question to you in advance so you will be prepared. Be prepared also for the opposing counsel to vary the facts in the hypothetical, and then ask you your opinion.

Learned Treatises

Many times the opposing counsel will ask you about a particular treatise or author and ask you if you recognize that article or that person to be authoritative on the subject at issue. Obviously, the attorney has found a differing view. Under the Rules, the opposing article is probably going to come into evidence one way or the other. That does not mean you have to agree that it is authoritative. But you should be prepared to recognize its existence and state why you disagree with its conclusions. You should also expect that the opposing counsel has reviewed all of your published works and will point out any perceived inconsistencies between those works and your testimony.

How much will you get paid?

Under the Rules of Civil Procedure you are generally entitled to a "reasonable fee" for your time spent in responding to discovery. The amount is usually based upon an hourly rate which could be earned in your practice. In Arkansas, the amount rarely exceeds \$200 per hour. When it comes to testifying in court, you are only entitled to be reimbursed \$30 per day plus mileage, unless a different agreement is worked out with the party calling you. Also, unless you are hired as an expert, insist on a subpoena for both deposition and trial. This helps avoid the appearance of bias or over-eagerness.

What To Wear

The sage advice still holds on what to wear: dress conservatively. Usually this means a dark blue suit, well-groomed hair, nothing flashy to detract from your testimony or credibility. No ponytails for men, no gaudy jewelry for men or women.

In the next *Legally Speaking*: Specific things to do and not to do for witnesses under direct and cross examinations.

Sources:

1. James W. McElhaney, *McElhaney's Trial Notebook* (3d ed. 1994).
2. Mark L.D. Wawro, "Effective Presentation of Experts," 19 *Litigation* 31, American Bar Association (Spring 1993).

Cover Story

Nothing to Sneeze About: Allergies and Allergic Rhinitis

Jim Mark Ingram, M.D.*

Allergies are a very common problem around the United States, including Arkansas. It is estimated that up to 40 million Americans (20-25%) have some form of allergic or atopic diseases. The terms atopic and allergic are frequently interchanged. In its broadest sense, the term allergy has been used in the past to describe any immunologic alteration in the capacity to react following contact with a foreign substance. Atopic, on the other hand, characterizes conditions produced by IgE-mediated hypersensitivity. Genetic factors play an important role in the susceptibility to these diseases. Patients inherit the tendency for allergies, not the specific allergies that their parents may have. An IgE response occurs normally in all individuals, but the presence of immune-response genes are needed for clinical manifestations to occur.

The Allergic Reaction

The essential components of allergic reactions include allergens, IgE antibodies directed at antigenic determinants on the allergen and mast cells. In order to initiate allergic responses, exposure to an appropriate antigen and a genetically determined capacity to respond with IgE production are required. Antigen presentation requires access of antigens to the mucous membrane, uptake by antigen-presenting cells, antigen processing and stimulation of local antibody production. IgE production occurs in the same local environment as antigen presentation, probably in the draining lymph nodes. The IgE that is produced sensitizes mast cells in the same environment by binding to high-affinity receptors for IgE on the cell surface. Although no one is certain, the production of sufficient IgE to render a subject allergic is thought to take years.

Once sensitized, mast cells may degranulate on subsequent allergen exposure. The bridging of IgE receptors by aggregation of IgE molecules bound to multivalent allergens initiates a biochemical reaction that leads to the secretion of a range of chemical mediators

from mast cells. These mediators then interact with surrounding tissues and elicit the allergic responses, the nature of which is determined by the local environment. Thus, mast cell mediators may cause rhinitis, conjunctivitis, sinusitis, cough, asthma, abdominal cramping, diarrhea, urticaria, eczema, headaches, hypotension, laryngeal edema and other consequences depending on the local environment.

Allergens: The Reason behind the Sneezing

Inhalant allergens are most frequently involved in allergic respiratory diseases, such as allergic rhinitis and asthma. These antigens, which directly impact on the respiratory mucosa, are usually derived from natural organic sources, such as house dust, pollens, mold spores, and insect and animal emanations. It appears that most particulate Aeroallergens are 2 to 60 um in diameter, and their allergenic constituents usually are proteins.

Inhalant allergic diseases may be episodic, seasonal (such as hay fever) or perennial. The most apparent seasonal allergens are pollens. Most tree pollens are released during the early spring. In most parts of the country, the height of the grass pollen season is late spring to midsummer. Although some species of weed pollen are airborne in spring and early summer, the greatest difficulty from weeds is in late summer and early fall. Despite popular belief, the heavy, sticky pollens of brightly colored flowers seldom cause allergy symptoms, as these pollens are spread by insects and not by wind currents. Inhalant allergens are most often responsible for rhinitis, conjunctivitis or asthma, although occasionally, urticaria or systemic anaphylaxis may occur. The two common misnomers, "hay fever" and "Rose fever," relate to the season of ragweed and grass pollenosis and are not associated with fever.

Exposure to non-seasonal allergens mainly through inhalation but in some instances by ingestion, accounts for year-round allergies. Among the inhalants, dust mites, mold spores, cockroaches and animal emanations

* Jim Mark Ingram, M.D., is with the Little Rock Allergy and Asthma Clinic.

Table 1
The Allergy Seasons in Arkansas

Early Spring (February-May)	Tree pollens (elm, oak, hickory and pecan)
Late Spring (May-June)	Grasses (bermuda, bahia, june and timothy)
Summer (July-August)	Ground or outdoor molds (Alternaria and Cladosporium)
Fall (mid-August-October)	Ragweed (plus secondarily, cocklebur, lambs'-quarter, pigweed and plantain)
Winter (November-February)	Dust mites, animal emanations, cockroaches, household molds (Aspergillus, Penicillium, Alternaria and Cladosporium)

are responsible for most perennial allergic rhinitis and asthma. Avoiding outdoor exposures to ubiquitous pollens and mold spores is difficult, but common sense measures to avoid unnecessarily heavy exposures may help. For example, camping and hiking are preferably done other than during the pollen season; mold-sensitive patients generally should avoid barns, hay, raking leaves and mowing grass; driving in air-conditioned vehicles is preferable; air-conditioning the house greatly reduces pollen in the indoor air; and closing bedroom windows during the pollen season is useful. High-efficiency particulate air filters are somewhat useful in reducing airborne allergens in small spaces, such as a bedroom.

When cost is not a significant consideration, installation of both an air conditioner and a high-efficiency particulate air filter or electronic filter in the central duct work of homes with forced hot-air heat may be considered.

House dust itself is a mixture of lint, mites, mite-derived feces, danders, insect parts, fibers and other particulate materials. Overwhelming evidence indicates that certain mites, *Dermatophagoides farinae* and *Dermatophagoides pteronyssinus*, are the principal sources of antigen in house dust. These arachnids encase their fecal materials in a coating rich in intestinal enzymes, and it is a protease within this coating that is the primary allergen. Mite fecal balls are large and heavy compared with other allergens, and thus only float in the air briefly after disturbance. Mites living in bedding, mattresses and carpets feed on human skin dander and require a warm, relatively humid environment to proliferate (65 to 70F) temperature and >50% relative humidity. They survive best in carpets, bedding and upholstery. Disturbance of the carpet perhaps by vacuuming, leads to a brief (30 minutes or so) episode of airborne mite feces, leading to inhalation and possible initiation of allergic reactions. Control of mites is aimed at eliminating the sites where mites survive best (remove carpets and "dust traps," encase bedding, and wash curtains and bedclothing in hot (130F) water. The use of acaricides on carpets to

kill the mites might also be considered.

Cat allergens, derived from both salivary and skin sources, are much smaller and lighter than dust allergens. Found constantly in the air in households with cats, these allergens are a potent source. Recent data suggest that weekly washing of the cat, when combined with other avoidance measures, greatly reduces the allergen load into the house. Dog allergens are found in saliva, skin dander and urine - not hair. Thus, short-haired or long-haired breeds may be equally allergenic. Cockroaches are another major allergen in urban environments, which should be suspected in any perennially allergic patient living in or around a city. Commercial spraying is the only measure that has been shown to reduce cockroach exposure.

Among the inhalant antigens, fungi occupy a unique position because they are found in both outdoor and indoor environments. Alternaria and Cladosporium are major outdoor allergens. Penicillium and Aspergillus are the most prevalent molds found in basements, bedding and damp interior areas. While pollen allergens typically become wind-borne during dry weather and are removed from the air during rain, high mold-spore counts are found in clouds and mist. Many upper respiratory tract allergy symptoms that occur during periods of high humidity are probably attributable to favorable conditions for mold growth. When indoor mold exposures are considerable, installing a dehumidifier in a damp area may be helpful. In general, use of a bleach works as well as any other product to remove fungi and mold in damp areas. The pattern of allergen exposure in Arkansas is shown in Table 1.

Allergic Rhinitis Pathogenesis

Airborne foreign particles impact on respiratory mucous membranes with each inhalation. Particulates the size of most pollen grains and the larger mold spores are deposited on the nasal mucosa. Only particles with an aerodynamic equivalent diameter of less than 2 to 4 um are likely to reach the lower respiratory

tract. However, evidence indicates that in addition to intact pollen grains themselves, pollen allergens are airborne in much smaller particles and even particle-free fractions of atmospheric moisture that potentially can reach the lower respiratory tract. It is thought that water-soluble allergens elute quickly from the antigen-containing particle and diffuse into the respiratory epithelium.

The nasal mucosa is enriched with a generous supply of submucosal glands, including both serous and mucous cells. Deep to the glandular tissue is a plexus of sinusoids that may engorge to cause nasal congestion. Just beneath the basement membrane is a dense network of postcapillary venules, which is a primary target for mast cell-derived mediators. The nasal mucosa responds to acute allergic responses with the following changes: increased vascular permeability resulting in the formation of subepithelial edema and the rapid production of albumin-rich secretions; increased glandular secretions; and pruritus and sneezing as reflex responses. This acute response is followed by a chronic inflammatory response, including neutrophil and eosinophil infiltration of the mucosa, mast cell hyperplasia (especially in the epithelium), increased basophils and eosinophils in secretions, and activation (increased IL-2 receptor expression) of the rich lymphocyte population located in the superficial lamina propria. The inflamed mucosa becomes hyperresponsive to both antigen and nonspecific irritants.

Histamine is thought to be the major mediator of acute allergic responses (being capable of causing vascular permeability, sneezing, pruritus and stimulating reflex-mediated glandular secretions). The late-phase allergic response is thought to be due to a combination of mast cell-derived inflammatory factors and cytokines (possibly released by mast cells, lymphocytes or other inflammatory cells).

Clinical History

The patient's history is fundamental in the diagnostic evaluation of rhinitis. Symptoms may include paroxysms of sneezing; itching of the nose, eyes, palate or pharynx; nasal stuffiness with partial or total obstruction of airflow; and rhinorrhea often accompanied by postnasal drainage. During peak symptom periods, one or more of the following additional complaints may be present; tearing and soreness of the eyes coupled with a gelatinous conjunctival discharge in the mornings, and loss of well-being with irritability, fatigue and depression. Symptoms related to accompanying sinusitis or to eustachian tube dysfunction and serous otitis may also be present, particularly in children. A personal history of other atopic diseases, a strong family history of allergy or a regular seasonal

pattern of compatible symptoms is strongly suggestive of an allergic cause. Although allergic rhinitis may develop at any age, about 70% of patients develop symptoms before the age of 30 years.

In assessing likely causative allergens, a detailed history of when and where symptoms occur (and do not occur) is of utmost importance. Correlation of symptoms with allergens known to occur seasonally in the patient's environment can provide important diagnostic information. In perennial cases, temporal relationships with the work week also may be revealing. The presence or absence of symptoms in various locales may also provide good clues for this medical detective exercise. Inquiry also should be made about what things patients believe are causing their difficulty. It is also of value to survey the patient's environment with respect to exposure to various potential allergens and currently used medications, especially nose drops or sprays. Once symptoms have started, they can be exacerbated by various nonspecific irritants, such as cigarette smoke, strong odors, air pollution and climatic changes. Persistence of symptoms beyond the pollen season may be due to the nasal hyperresponsiveness, to superimposed hypersensitivity to perennial allergens, or to supervening infection.

Physical Findings

Positive physical findings during periods of acute allergic rhinitis are limited to the nose, eyes and ears. Occasionally, flaring of atopic dermatitis and, rarely, urticaria may develop during the season of allergic involvement. Rubbing the nose upward repeatedly in childhood to "scratch an itchy nose" and to relieve an obstructed nasal airway may cause a crease across the lower part of the nose. Mouth breathing and infraorbital "shinners" (venous dilation of the skin beneath the eyes) are common. Pale, bluish, edematous nasal turbinates coated with thin, clear secretions are characteristic. Nasal membrane swelling and accumulations of clear mucus may obstruct the nasal airway and block the sinus ostia leading to sinusitis. Tearing, scleral and conjunctival injection and edema, and periorbital swelling may be present. Fluid in the middle ear may lead to decreased hearing with a dull, immobile tympanic membrane on physical examination.

Laboratory Diagnostic Procedures

Despite the development of in vitro methods of detecting IgE antibodies, skin testing (prick or intradermal) with appropriate allergens are the least time consuming and least expensive studies, remaining the most revealing tests for disclosing specific sensitivities. Skin testing can be performed on infants as young as 1 to 4 months of age, although age dictates both the choice of allergens used and the clinical conditions for

which they can be used. In infants younger than 1 year, food antigens are the likely offenders, causing eczema or anaphylaxis. Inhalant allergens are more likely to be involved after 2 to 4 years of exposure, although sensitization to indoor allergens can occur much more quickly. In exceptional cases, such as in patients with extensive eczema or marked dermatographism that negates use of skin tests, in vitro or skin tests, however, it is essential that the relevance of the results to the patient's current clinical problems be assessed in the light of the detailed history.

Since total IgE levels are elevated in only 30% or 50% of patients with allergic rhinitis and increased total IgE levels also occur in nonallergic conditions, an elevated level does not make a diagnosis of allergy, and a normal level does not rule it out. Thus, the clinical value of determining total serum IgE levels is limited.

The peripheral eosinophil count may be elevated in patients with allergic rhinitis, but this measurement is also of limited usefulness. A smear of nasal secretions for eosinophils is of more significance and is best performed by having the patient blow his or her nose onto a plastic sheet to collect the specimen and by preparing the air-dried slide with Hansel's or Giemsa stain for microscopic examination. A preponderance of eosinophils suggests the diagnosis of allergic rhinitis, but this preponderance can also occur in cases of eosinophilic nonallergic rhinitis. Considerable numbers of neutrophils are seen with viral or bacterial infections and in rhinitis medicamentosa.

Complications

Serous Otitis Media - Serous otitis media can be a complication of allergic rhinitis, especially in children. It may result from obstructive dysfunction of the eustachian tube as a result of mucosal edema and secretions. However, in many instances of serous otitis media, allergic factors cannot be identified. Sometimes the process is acute and self-limited. When it is chronic, it can lead to hearing loss with resultant adverse effects on speech development, cognition or both. The young child is at greatest risk for these latter complications. Eustachian tube dysfunction makes the middle ear more susceptible to recurrent infections, which in turn may predispose it to less readily reversible mucoid effusions.

In treatment of patients with serous otitis media, appropriate medications to keep the nasal airway patent should be used. Therapy with antihistamines, decongestants, topical steroids and antibiotics can be helpful in selected patients. When fluid and hearing loss persist despite medical treatment, a myringotomy with insertion of a tympanostomy tube will usually restore hearing to normal while treatment is continued. Obstructing adenoid tissue may require surgical intervention.

Chronic sinusitis - In children, symptoms from sinusitis include chronic nasal discharge, persistent coughing (especially at night) and recurrent otitis media. Pain, headache and fever occur less frequently, whereas in adults these along with purulent nasal discharge are the most frequently recognized signs and symptoms. The physician should consider diagnostic studies for sinusitis whenever symptoms of upper respiratory tract infection or rhinitis are more protracted than expected, the patient has dull to intense throbbing pain over the involved sinus area, the patient's asthma is not responding appropriately to medications or the patient has prolonged or persistent bronchitis that has failed to respond to appropriate therapy. On physical examination, edema and discoloration below the eyes may be impressive. The nasal mucosa is inflamed and a purulent discharge frequently is seen on the floor of the nose or beneath the middle turbinate. Whenever sinusitis is diagnosed, the possibility of other underlying processes should be considered.

Therapy

The treatment of patients with rhinitis is dependent on the correct diagnosis. Three basic therapeutic techniques should be considered in treating either seasonal or perennial allergic rhinitis: (1) avoidance of the offending allergens; (2) use of appropriate pharmaceutical agents; and (3) allergy immunotherapy.

Allergen Avoidance - Whenever feasible, avoidance is the preferred form of treatment since it both relieves symptoms and eradicates the cause of the difficulty. It is the only treatment necessary in most cases of allergy to foods, drugs, animals and miscellaneous allergens. Specific avoidance measures were discussed in regards to specific allergens earlier.

Histamine Medications - H-1 antihistamines are highly effective in controlling symptoms of nasal itching, rhinorrhea and sneezing and constitute the most frequently used drugs for the treatment of allergic rhinitis. They act primarily as competitive inhibitors for histamine at its H-1 receptor sites, but the older products also possess varying degrees of anticholinergic, sedative, antiemetic and local anesthetic activity. The newer, nonsedating antihistamines are generally more selective in their actions. Nasal congestion is less responsive to antihistamines than sneezing, itching, rhinorrhea and eye symptoms.

On the basis of chemical structure, the commonly used antihistamines have been classified into six groups (see table 2). In addition, numerous combined antihistamine-decongestant preparations are available. Patients responding inadequately to an antihistamine of one group may have a good response to a drug from another group.

A major limitation to the use of older antihistamines is

Table 2
Antihistamine Classification

<u>Class</u>	<u>Nonproprietary Name</u>	<u>Trade Name</u>
Ethanolamine	Diphenhydramine hydrochloride	Benadryl
Alkylamines	Chlorpheniramine maleate Brompheniramine maleate	Chlor-trimeton Dimetane
Piperazines	Hydroxyzine hydrochloride Cetirizine	Atarax Zyrtec
Phenothiazines	Promethazine hydrochloride	Phenergan
Piperdines	Azatidine maleate	Optimine
Miscellaneous	Cyproheptadine hydrochloride Clemastine fumerate	Periactin Tavist
Nonsedating antihistamines	Terfenadine Astemizole Loratadine	Seldane Hismanal Claritin

sedation and excessive mucosal drying. Because of the latter, they have been considered undesirable in patients who have both asthma and allergic rhinitis. However, recent evidence has demonstrated they can be used safely in patients with asthma. A new generation of H-1 antihistamines has been developed that is devoid of these problems. Examples are astemizole, terfenadine, loratadine and cetirizine.

Patients should start receiving antihistamines before the allergy season begins or when they become symptomatic. The rule of thumb is to use the smallest dose of product that is effective. Because of their effectiveness and wide acceptance, the nonsedating antihistamines are the agents of choice. If cost limitation is essential, use of a relatively nonsedating classic antihistamine (such as chlorpheniramine maleate) can be used.

A variety of nose drops and nasal sprays that contain alpha adrenergic agonists are available for temporary relief of congestion. The most common topical preparations are phenylephrine hydrochloride, a short-acting agent, and two longer-acting decongestants - oxymetazoline hydrochloride and xylometazoline hydrochloride. Although topical therapy avoids systemic effects, prolonged therapy (more than 3 or 4 days of use) may result in progressively more severe nasal obstruction due to a rebound reengorgement (rhinitis medicamentosa). Accordingly, these preparations are contraindicated for long term use.

Topical cromolyn sodium is useful in allergic rhinitis. Its effects are best seen when used prophylactically and

are of short duration; therefore, it must be administered 2 to 4 times a day regularly. Cromolyn is somewhat less potent than topical steroids but is essentially devoid of side effects. It also is marketed as a 4% ophthalmic solution that may be used in treating patients with allergic conjunctivitis and giant papillary conjunctivitis.

The usefulness of topical steroids for the treatment of allergic rhinitis has been long recognized. Several potent and rapidly metabolized products (beclomethasone, flunisolide, triamcinolone, fluticasone and budesonide) when applied intranasally are effective in the treatment of allergic rhinitis and lack significant systemic effects. Local burning, irritation and occasional epistaxis are the most common side effects. There has been no evidence of mucosal atrophy and pharyngeal candidiasis has not been a problem. Nasal septal perforation does occur rarely with topical steroid use, especially when the patient discharges the medication onto the septum. Care in instructing the patient to deliver the spray away from the septum is useful in preventing this problem. Perforations, should they occur, are anterior and of cosmetic importance only.

Topical nasal steroids reduce the irritation, sneezing, itching, congestion and rhinorrhea of allergic rhinitis, especially when used with antihistamines. They fail to relieve ocular symptoms (which attests to the lack of systemic effects). They also have a role in the therapy for perennial allergic rhinitis, nonallergic rhinitis with eosinophilia syndrome and nasal polyps. In

addition, they can be helpful in weaning patients with rhinitis medicamentosa from vasoconstrictor agents.

Immunotherapy for Allergic Rhinitis

Immunotherapy (hyposensitization) is a method employing subcutaneous injections of gradually increasing doses of antigenic (allergenic) materials for the purpose of altering the immunologic response of atopic patients. Since its initial introduction in 1911, multiple, controlled clinical investigations of the response to extract therapy have been done. Many studies have shown that immunotherapy, especially with large doses of antigen, benefits patients with seasonal and perennial allergic rhinitis, as well as allergic asthma. Immunotherapy has been most successful for the treatment of allergic rhinitis caused by pollens, animal dander and dust mites. The efficacy of immunotherapy for eczema, food allergy or urticaria has not been established.

Allergenic extracts used for immunotherapy are prepared from a variety of sources including pollens, epidermals, molds and insect venom. Once made, allergic extracts should be refrigerated whenever possible to prevent protein degradation of the extract. Treatment schedules vary among individuals, but the average patient can usually begin with doses of approximately 1:100,000 dilution. Injections are given in increasing doses as tolerated every 3 to 7 days towards a maintenance dose, which may also vary according to individual needs.

Maximal clinical benefit from immunotherapy usually occurs within 12-24 months after reaching adequate maintenance doses. Continuation of treatment depends on the response of each patient. The average patient usually receives 3-5 years of therapy. At present, there are no measurements that can accurately predict the probability of clinical relapse after discontinuing immunotherapy. A practical approach is to continue injections every 4-6 weeks for 1-2 symptom-free years and then discontinue.

Overall Treatment Plan for Allergic Rhinitis

Patients should be evaluated for specific allergen sensitivity by a careful history, confirmed by skin testing. Avoidance of incriminated allergens is the first line of therapy. Most patients will respond to a combination of antihistamine and topical nasal steroid with a rapid reduction in symptoms. Cromolyn is an acceptable alternative, either alone or combined with an antihistamine. Allergy immunotherapy should be considered in patients with pollen, animal or dust mite allergies who are not responding adequately to pharmacotherapy, who require medications more than 6 months of the year or who develop complications from the pharmacotherapy.

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Cardiology Commentary and Update

Mark St. Pierre, M.D.*
J. David Talley, M.D.*

PRIMARY PREVENTION OF CORONARY ARTERY DISEASE

Atherosclerotic coronary artery disease (CAD) and its associated myocardial manifestations (coronary heart disease, CHD) is the leading cause of death and disability in the United States. CHD is responsible for more than 50% of all cardiovascular deaths and one of every four deaths. Nearly 1.5 million Americans sustain an acute myocardial infarction (MI) annually, and of these, 500,000 die. CHD is also the leading cause of premature, permanent disability in the U.S. labor force and accounts for 20% of disability allowances by the Social Security Administration. In 1989, CHD was responsible for \$22 billion in direct and \$32 billion in indirect economic costs.¹ CHD is a major public health problem and simple preventive strategies offer the promise of reducing mortality and morbidity.

This review will focus on preventing CAD and CHD by modifying hypercholesterolemia, cigarette smoking, systemic arterial hypertension, and diabetes mellitus. In addition, the benefits of moderate alcohol consumption, aspirin (ASA) use, estrogen replacement therapy in postmenopausal women, exercise, and obesity will be discussed.

Hypercholesterolemia

The World Health Organization Cooperative Trial evaluated the effect of clofibrate on more than 10,000 middle-aged men (30 to 59 years old) who had a high total cholesterol.² During the 5 year follow-up period, patients receiving clofibrate had a 9% reduction in serum cholesterol, 25% risk reduction in developing non-fatal MI, and a 20% decrease in risk of developing CHD. CHD mortality was not reduced, and total mortality was paradoxically increased due to an increase in gastrointestinal cancer. This association between low levels of cholesterol and gastrointestinal cancers has not been confirmed by other trials.

The Lipid Research Clinic Coronary Primary Prevention Trial (LRC-CPPT) reported that decreasing cholesterol reduces the occurrence of future CHD

events.³ More than 3800 men with a total cholesterol greater than 265 mg/dl and low density lipoprotein subfraction (LDL) more than 175 mg/dl, without systemic arterial hypertension, hypertriglyceridemia or diabetes mellitus were enrolled. They were randomized to receive diet therapy alone or the bile acid sequestrant, cholestyramine, during the study period of 7.4 years. While the recommended dose of cholestyramine was 24 grams/day, the average dose was 14 grams/day.

By itself, diet treatment decreased the total cholesterol 5% and LDL cholesterol by 8%. Patients treated with cholestyramine had a 12% reduction in total cholesterol and 19% decrease in LDL cholesterol. Cholestyramine reduced the risk of non-fatal MI by 19%, cardiovascular deaths by 24%, angina by 20%, newly positive exercise test by 25%, and coronary artery bypass graft surgery by 21%. Total mortality was not different between the two groups, despite the decline in cardiovascular deaths. Patients treated with cholestyramine had a higher level of mortality from non-cardiovascular causes, particularly motor vehicle accidents and other forms of violent death. These perplexing results appear to be due to a statistical quirk unrelated to any pathological effect of cholestyramine or cholesterol lowering. The findings of LRC-CPPT provided strong support in favor of the lipid hypothesis for coronary atherosclerosis and established that a 1% decrease in total cholesterol is associated with a 2% reduction in CHD event rate.

In the Helsinki Heart Study, 4081 middle-aged men without known CHD but an elevated non-HDL cholesterol (> 200 mg/dl), were randomized to receive either gemfibrozil or placebo.⁴ Patients with elevated triglycerides were included. During the 5-year follow-up period, the gemfibrozil group had 10% reduction in total cholesterol, and a 35% reduction in triglycerides. These favorable results were accompanied by a 34% reduction of cardiovascular death or non-fatal MI. An increased HDL level was the strongest predictor of reduction in CHD events. Patients with a ratio of LDL to HDL > 5 , showed the greatest

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benefit of treatment with gemfibrozil, resulting in a 71% reduction in CHD event rate. These findings provided a strong support of the role of low HDL cholesterol levels to promote the development of CHD.

Finally, the results of the West of Scotland Coronary Prevention Study were recently published.⁵ This study demonstrated that the use of pravastatin, in asymptomatic men without prior MI, reduced total cholesterol by 25%, and the relative risk of non-fatal MI or death from CHD by 31%. This benefit was evident by 6 months after beginning treatment and increased during the 5 year follow-up period. There was a 22% reduction in death from any cause and there were no excess deaths from non-cardiovascular causes in the pravastatin group unlike previously reported studies.

Smoking Cessation

The magnitude of risk associated with cigarette smoking is similar to that of systemic arterial hypertension and hypercholesterolemia, however, because cigarette smoking is present in a greater proportion of the population, it ranks as the largest preventable cause of CAD. Smoking is associated with 30% of CHD deaths annually in the U.S. Current smokers have 2 to 4 times the risk of CHD compared with nonsmokers.⁶ There is a strong dose-response relationship between the number of cigarettes smoked and the relative risk of fatal CHD in both males and females.

The Surgeon General's report in 1989 noted that cigarette smoking doubles the incidence of CAD and increases mortality from CHD from 50 to 70%. The three randomized cessation trials decreased cardiac events from 7 to 47%. These trials did not include patients with CAD.

The risk of MI declines rapidly within several months after stopping smoking. Stopping smoking reduces risk of CHD by 50% within one year, and within two to three years the risk of MI is similar to those individuals who had never smoked.⁷ This improvement may be due to the reversible prothrombotic effects of cigarette smoke including a decrease in fibrinogen and platelet adhesion. Other beneficial effects of stopping smoking include a reduction of carboxyhemoglobin and an increase in HDL cholesterol.

Patients need to be motivated to stop smoking, especially after a cardiac event. Nurse-managed smoking cessation program decrease smoking rates to less than 1/2 in patients who previously smoked. These programs address psychological and behavioral dependency on smoking and offer nicotine replacement therapy to reduce the symptoms of withdrawal and improve cessation rates.

Systemic Arterial Hypertension

Systemic arterial hypertension doubles the risk of developing CHD. It is present in one-third of the U.S. adult population. Primary prevention trials using diuretics and beta-blockers showed a 20-fold reduction

in mortality from all vascular causes, 40-fold reduction in stroke, and nearly a 15-fold reduction in MI.⁸

Diabetes Mellitus

Diabetes mellitus increases the risk for CHD 2 to 3 times in men and 3 to 7 times in women. Diabetes mellitus negates the cardioprotective benefit of premenopausal women. Atherosclerosis accounts for 80% of all diabetic mortality. Although one would expect that improved glucose control would reduce the risk of CHD, this was not demonstrated in the University Group Diabetes Program, the only large-scale clinical trial able to study cardiovascular end points. There have been no clinical trials designed specifically to test whether glucose control will prevent macrovascular (atherosclerotic) complications of diabetics. However, from the Diabetic Control and Complication Trial, results indicate that improved glucose control reduces the microvascular complications of insulin dependent diabetes mellitus.

Ethanol Use

There is a clear correlation between moderate ethanol intake and decreased levels of CAD. The protective effects of ethanol are secondary to increased levels of HDL cholesterol, particularly subfractions HDL2 and HDL3, both of which are inversely related to the risk of myocardial infarction.⁹ Recently, however, modest doses of ethanol have been found to have an acute effect on the coagulation system by inhibiting plasminogen activator inhibitor-1.

Several studies have shown an inverse association between moderate alcohol consumption and the risk of MI. The Framingham Study found a 30% reduction in risk among men and women who consumed 30 grams of alcohol per month. The Honolulu Heart Study reported 54% risk reduction in men who consumed 40 ml of alcohol a day. And the Nurse's Health Study observed a 40% reduction in risk among women who consumed 10-15 grams of alcohol a day, as compared to nondrinkers. The quantity of alcohol is roughly equivalent to 1 ounce of hard liquor, 12 oz. of beer, or 4 oz. of wine. Most researchers have concluded that alcohol intake should be limited to one to two drinks a day for men, and one drink a day for women.

Aspirin

Two randomized trials have evaluated the use of aspirin as primary prevention of CHD. The U.S. Physicians Health Study randomized 22,000 male physicians to ASA (325 mg) or placebo.¹⁰ The 5-year study was stopped because of a 44% reduction in non-fatal MI. The benefit was seen mainly in men over 50 years of age. There was no difference in total or cardiovascular mortality. The ASA treated group had a higher incidence of hemorrhagic stroke (0.2 vs. 0.1 %) and a significant increase in hemorrhage from the gastrointestinal tract (0.5% vs. 0.3%).

The British Doctors Trial included 5,000 male physi-

cians.¹¹ Two-thirds were randomized to ASA (500 mg/day) compared to 1/3 who received placebo. After 6 years, there was no difference in MI or cardiovascular death in the two groups.

Meta-analysis of these two studies indicates ASA reduces the risk of a first non-fatal MI by 32%. The absolute risk reduction is quite small (two events per 1,000 patient/yr.) because the prevalence of cardiovascular events was low among the physician in these two studies. Therefore, the U.S. Prevention Services Task Force recommends ASA for men over the age of 40 who are at risk for MI.

Estrogen Replacement Therapy

Premenopausal women are relatively protected from CHD compared to similarly aged males. From the Framingham Study, the risk of CHD increases dramatically in postmenopausal women. An overview of 31 observational studies reported that CHD was reduced by 44% in postmenopausal females treated with estrogen.^{12,13} The risk of breast cancer was 1.3 for estrogen alone and 1.4 for estrogen plus progesterone.

The Postmenopausal Estrogen/Progesterone Trial was a three-year study of 875 postmenopausal women who received placebo, estrogen, or three different estrogen/progesterone combination regimens comparing the effects on HDL, LDL, fibrinogen and blood pressure.¹⁴ Estrogen and combination therapy increased HDL, lowered LDL and fibrinogen and had little effect on systemic blood pressure. Estrogen without progesterone increased HDL, but increased the incidence of endometrial hyperplasia. Females at high risk for developing CAD should receive estrogen alone or combined with progestin. Physicians should monitor for harmful side effects, especially endometrial hyperplasia.

Exercise

Exercise lowers systemic arterial blood pressure and heart rate, the two major determinants of myocardial oxygen demand. Physical exercise also increases HDL, decreases platelet adhesiveness and the adrenergic response to stress. Physical inactivity doubles the risk of dying from CHD. The American Heart Association recommends 30 minutes, three to four times per week of moderate intensity exercise. This is equal to burning 200 calories or walking two miles briskly. Approximately 80% of adults do not meet this guideline.

Obesity

Obesity is defined as >20% of ideal body weight, and affects one-third of the U.S. adults. Obesity is associated with other CAD risk factors including systemic arterial hypertension, glucose intolerance and decreased HDL cholesterol. Most of the CAD risk from obesity is mediated by their associations. No study has specifically examined the effect of weight loss on CHD, however, observational studies have noted that avoidance of obesity is reduces the risk of MI by 35 to

55%. Also the role of weight reduction in the treatment of systemic arterial hypertension, dyslipidemia and diabetes makes it an obvious choice for intervention.

Conclusions

Risk factors which promote the development of CAD include hypercholesterolemia, systemic arterial hypertension, cigarette use, and diabetes mellitus. Patients need to be informed and counseled on the value of modifying these conditions.

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Membership Directory - a valuable source for physicians, clinics and other health care professionals and businesses - will be available in August. The directory lists all AMS members by city with their address, phone and fax numbers and specialty. The directory also contains information such as the dates of AMS and AMA meetings, county executives and specialty societies. **All AMS members will automatically receive one directory through the mail at no charge.**

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Management of Animal Bites

All individuals bitten by an animal should be evaluated by their physician as to the need for treatment and rabies prophylaxis. Prophylaxis may be deferred if the biting animal is a dog or cat, and is available for quarantine. This is possible since a dog or cat infected with rabies will become symptomatic and die within 10 days. If the dog or cat remains healthy for 10 days, prophylaxis is unnecessary. There is no reliable quarantine period for wildlife, since many animals may carry and transmit rabies virus in the absence of symptoms. Animals other than dogs or cats must be sacrificed and the head submitted to the Arkansas Department of Health (ADH) Laboratory for fluorescent antibody (FA) testing. A negative FA test is evidence that rabies virus is not present in the brain and saliva and eliminates the necessity for post exposure treatment. The ADH is open 24 hours a day to receive specimens. All practicing veterinarians and county health units have insulated shipping containers and will assist in the proper packing and shipping of rabies suspect heads.

The Veterinary Public Health Office in the ADH provides consultation on the necessity for post exposure rabies treatment for all animal bites. Vaccine is stocked at the ADH pharmacy and will be released to physicians on request. Phone Dr. Tom McChesney for consultation or vaccine requests. Office #661-2597; Home #982-5697.

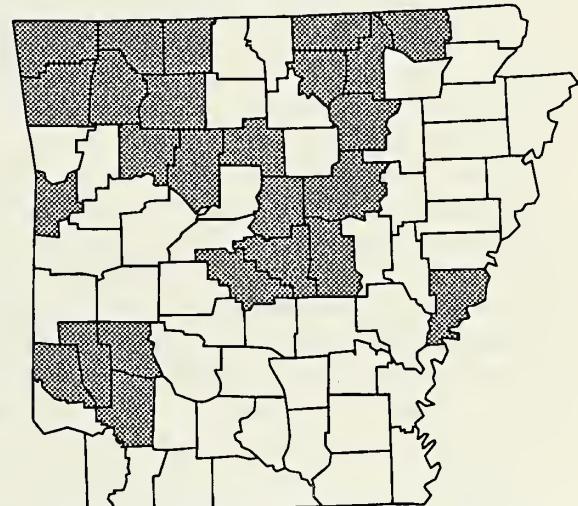
Deliveries of rabies vaccine are made by United Parcel Service or commercial bus or air, whichever will provide the most timely service.

Treatment with the current Human Diploid Cell Vaccine (HDCV) requires five 1-ml. injections in the deltoid muscle on days 0, 3, 7, 14 and 28. The vaccine is lyophilized, and each vial is recombined with one ml. of diluent immediately prior to injection. Human Rabies Immune Globulin (HRIG) is given on the first day of treatment at the rate of two ml. per 33 pounds of body weight. If the bite is in a fleshy part of the body, half of the HRIG should be infiltrated around the wound. HRIG furnishes immediate antibody protection and may be the most important part of the treatment.

During 1995, approximately 150 Arkansans were administered post-exposure treatment after being bitten by

a rabid or suspected rabid animal. There have been no serious systemic or neuroparalytic reactions to HDCV, although about 20% of the patients report erythema, pain, swelling or itching at the injection site. Serologic testing is no longer necessary except in those patients whose immune response may be compromised. Protective antibody levels were developed by 99.9% (1299 of 1300) persons tested.

The Shaded Counties Submitted Positive Rabies Specimens to the ADH During 1995



Rabies Update

Since 1960, rabies in the United States has been more frequently reported in wild animals than in domestic animals. From 1990 to 1994, rabies in wild animals accounted for almost 92% of all cases reported to the Centers for Disease Control and Prevention (CDC). The most frequently reported rabid wild animals in order of prevalence are raccoons, skunks, bats and foxes. Raccoon rabies predominates in the Northeast, Southeast and Mid-Atlantic states. (Only two (2) raccoons have been positive for rabies in Arkansas, one in 1987 and one in 1992. Both were infected with the skunk strain of rabies virus.) Skunk rabies predominates in the Central and Western states. During 1995, fifty-two (52) animals were identified as being rabid in Arkansas. The two most frequently reported were

skunks (38) and bats (five) (See chart 1). About 50% of the skunks and 10% of the bats tested in the Arkansas Department of Health laboratory are rabid. These animals are submitted to the laboratory because of bizarre behavior or because they have bitten another animal or a human.

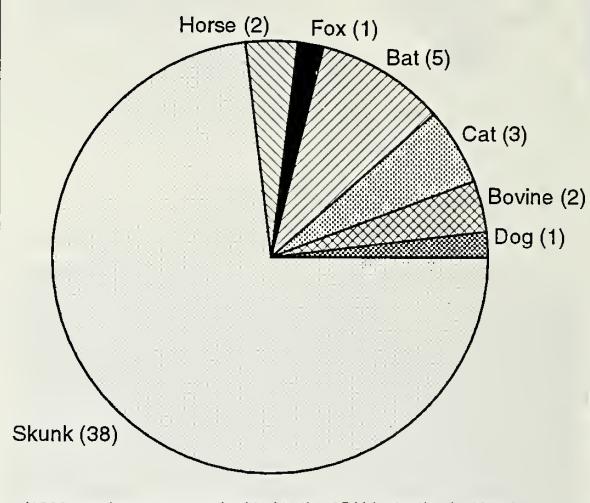
In the United States, the number of cases of indigenous human rabies reported over the past thirty years has averaged only 1.17 cases per year. In the past two decades, rabies virus variants associated with bat reservoirs have been responsible for the largest number of human cases.

There were six cases of rabies reported in humans in 1994 and three additional cases in 1995. This brought the total cases of human rabies in the United States from 1980-1995 to twenty-eight. Seventeen of these individuals were infected with variants associated with animal reservoirs in the United States. Monoclonal antibody analysis, genetic sequencing, or exposure history indicated that 15 of the 17 people were infected with variants associated with rabies in bats. Ten (10) of the virus variants obtained from these 15 persons have been characterized as a silver-haired bat variant. Although numbers remain small, the possibility of infection of human beings with a rabies virus from bats is a public health concern.¹

There have been only two human rabies deaths in Arkansas residents in the past forty years. The last case, in 1991, occurred in a twenty-nine-year-old man from Clark County. He did not give a history of being bitten by an animal and had never traveled beyond the southwest region of the state during his lifetime. Post mortem samples of brain tissue were positive for rabies by direct fluorescent antibody testing. Monoclonal antibody typing suggested that the rabies variant was that commonly found in silver-haired bats. The patient lived alone in a previously abandoned rural home. His girlfriend reportedly witnessed an incident in the home approximately a month prior to onset of symptoms, when a bat landed on his face and possibly bit or scratched him. The patient failed to notify the Health Department of the bite or send the bat to the ADH laboratory for rabies testing.²

The three U.S. cases of human rabies reported for 1995 were all caused by bat rabies variants. One of these cases occurred in a four year old female in Washington State who died of rabies in March of 1995. The family had found a bat in her bedroom one month prior to her onset of illness, but no bite was reported

Chart 1
Positive AR Rabies Specimens in 1995
by Animal Type



(1320 specimens were submitted to the ADH for testing in 1995.)

or seen. The bat had been buried, but was exhumed and tested for rabies. It was found to be positive and the virus strain was identical in both the patient and the bat.³

It was mentioned previously that fifteen of the twenty-eight cases of human rabies that have been reported since 1980 had been caused by bat strains of the virus. Of this number, only six had a clear history of animal bite exposure. This finding suggests that even limited contact with bats infected with rabies may be associated with transmission. Cases reported show that in situations in which a bat is physically present and the persons cannot exclude the possibility of a bite, post exposure treatment should be considered unless prompt testing of the bat has ruled out rabies infection. This recommendation should be used in conjunction with guidelines of the Advisory Committee on Immunization Practices.⁴

Footnotes:

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Reported Cases of Selected Reportable Diseases in Arkansas

Profile for April 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases April 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	17	47	40	28	152	187
Giardiasis	8	38	34	29	131	126
Shigellosis	6	25	35	46	175	193
Salmonellosis	22	71	52	56	332	534
Hepatitis A	41	195	82	34	663	253
Hepatitis B	1	30	26	16	92	60
HIB	0	0	4	2	6	5
Meningococcal Infections	3	18	20	26	39	55
Viral Meningitis	3	11	5	9	31	62
Lyme Disease	1	5	3	5	9	15
Rocky Mountain Spotted Fever	1	2	3	3	30	18
Tularemia	1	2	2	6	22	23
Measles	0	0	2	1	2	5
Mumps	0	0	4	3	5	7
Rubella	0	0	0	0	0	0
Gonorrhea	423	1632	1536	1914	5437	7078
Syphilis	74	312	334	342	1017	1096
Legionellosis	0	0	5	4	5	16
Pertussis	0	2	12	17	60	33
Tuberculosis	30	62	71	63	271	264



Arkansas HIV/AIDS Report

1983-1996

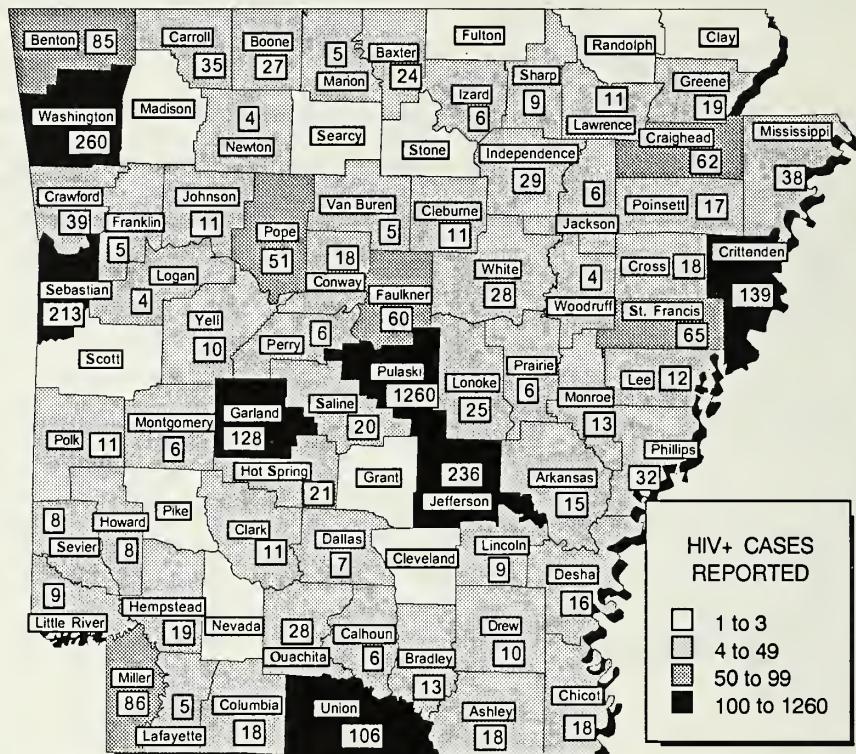
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

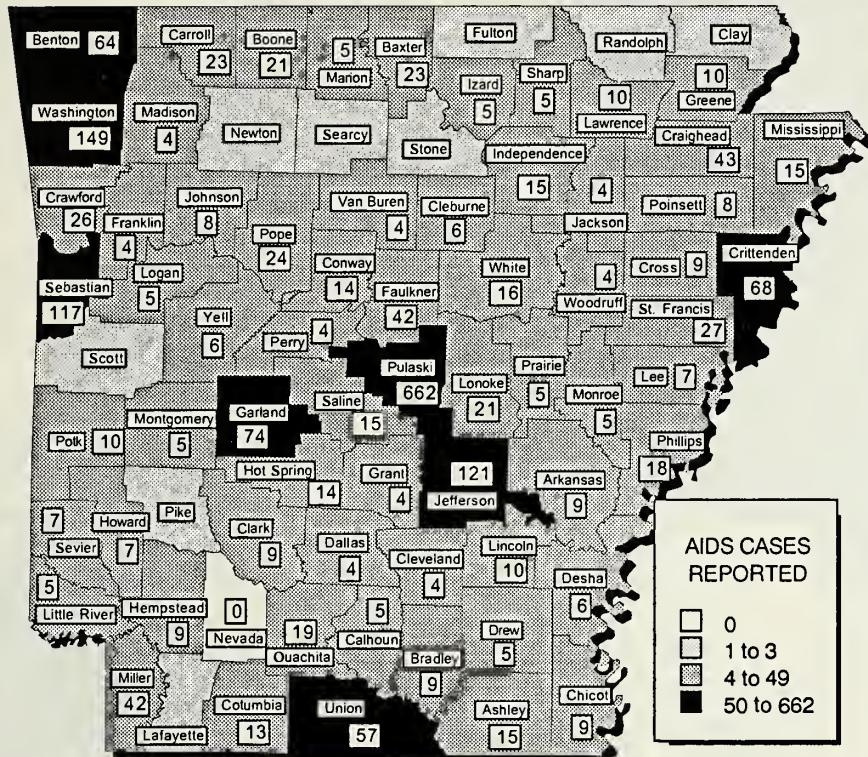


County of residence at the time of test for the 3,583 Arkansans reported to be HIV+. (5/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	100	215	248	413	400	392	352	367	337	136	2,960	83
	Female	8	26	37	68	85	81	94	90	92	42	623	17
A G E	Under 5	1	1	2	8	13	6	3	7	2	1	44	1
	5-12	0	1	5	1	2	1	0	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	16	134	4
	20-24	12	40	52	71	44	49	64	60	47	15	454	13
	25-29	21	70	71	112	105	107	111	85	78	39	799	22
	30-34	25	50	64	116	120	111	91	102	101	28	808	23
	35-39	19	36	40	80	88	68	77	69	81	37	595	17
	40-44	16	17	17	43	50	41	47	50	46	18	345	10
	45-49	6	8	18	13	20	26	18	27	24	7	167	5
	50-54	2	1	5	8	14	14	10	12	17	7	90	3
	55-59	1	3	4	6	3	13	6	7	5	6	54	2
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	3	36	1
R A C E	White	87	170	174	328	298	293	278	259	260	87	2,234	62
	Black	21	69	108	151	184	173	163	184	159	79	1,291	36
	Hispanic	0	1	3	1	3	4	1	7	3	2	25	1
	Other/Unknown	0	1	0	1	0	3	4	7	7	10	33	1
R I S K	Male/Male Sex	64	137	140	243	246	261	242	229	157	49	1,768	49
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	50	8	530	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	25	8	244	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	94	56	17	514	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	35	41	23	11	7	28	134	96	396	11
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	178	3,583	100

Arkansas HIV/AIDS Report

1983-1996



Of the 3,583 Arkansans reported to be HIV+, 2,011 have been diagnosed with AIDS. (5/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committee members, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	95	1,748	87
	Female	5	6	10	20	25	35	64	42	36	20	263	13
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	1	18	1
	20-24	7	5	11	11	14	14	31	22	11	6	132	7
	25-29	24	22	13	44	43	67	78	45	47	14	397	20
	30-34	20	21	21	47	42	73	98	81	75	34	512	25
	35-39	19	15	20	31	38	55	80	52	49	26	385	19
	40-44	10	7	4	21	35	28	49	39	35	18	246	12
	45-49	5	3	3	14	6	24	28	22	17	6	128	6
	50-54	1	1	2	5	6	7	10	12	15	2	61	3
	55-59	2	2	4	1	4	8	8	5	6	5	45	2
	60-64	1	1	1	1	1	2	6	10	5	0	28	1
	65 and older	1	4	0	4	2	2	3	3	9	3	31	2
R A C E	White	74	61	58	141	134	206	273	190	174	66	1,377	68
	Black	16	20	21	47	66	75	121	102	97	47	612	30
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	166	134	49	1,175	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	47	6	288	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	9	163	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	34	11	200	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	1	35	2
	Undetermined	0	2	1	3	1	2	2	8	26	38	83	4
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	115	2,011	100

Arkansas Department of Health HIV/AIDS Surveillance Program

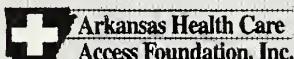
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Thank You!

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letters we have received, your
involvement in our program is
appreciated and in many
cases life-saving.

It has been three days since you sent me to the doctor and I have a ways to go to be 100%, but I can breathe and walk across the room now. I had given up hope almost, and I remembered Arkansas Health Care. The doctor gave me two of the medicines I needed and the pharmacy you sent me to filled the antibiotics. Your doctor even "chewed" me out for not coming in two weeks previously. I'm starting to feel good again. God bless you.

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Asi, Wael, Internal Medicine/Pulmonary. Medical Education, American University of Beirut, Lebanon, 1986. Internship/Residency, Good Samaritan Hospital, Baltimore, Maryland, 1991/1993. Board certified.

HELENA

Cruz, Eduardo Vargas, Physical Medicine & Rehabilitation. Medical Education, University of East, RMMMC, College of Medicine, Quezon City, Philippines, 1974. Internship, Jersey City Medical Center, New Jersey, 1977. Residency, Jamaica Hospital and VA Medical Center, Brooklyn, New York, 1980.

JONESBORO

Labor, Phillips Kirk, Ophthalmology. Medical Education, Louisiana State University Medical School, Shreveport, 1991. Internship, Louisiana State University Medical Center, 1992. Residency, Eye Foundation Hospital, University of Alabama, 1995. Board eligible.

LITTLE ROCK

Beau, Scott Lawrence, Cardiovascular Disease/Electrophysiology. Medical Education, McGill University, Montreal, Quebec, Canada, 1987. Internship/Residency, Boston University Hospital, Massachusetts, 1988/1990. Fellowship, Barnes Hospital, St. Louis, Missouri, 1996. Board certified.

Cook, Timothy Richard, Pulmonary/Critical Care. Medical Education, University of Tennessee, Memphis, 1989. Internship/Residency, University of Texas Health Science Center, San Antonio, 1990/1992. Board certified.

Murillo-Lopez Fernando H., Ophthalmology. Medical Education, Johns Hopkins University School of Medicine, Baltimore, Maryland, 1990. Internship, Washington Hospital Center, 1991. Residency, Johns Hopkins Hospital/Wilmer Eye Institute, 1994. Board pending.

MALVERN

Martin, Joan Barbara, Family Practice. Medical Education, University of Texas Medical School, Houston, 1979. Internship, University of Colorado, 1980. Residency, Ft. Collins, 1982. Board certified.

MOUNTAIN VIEW

Varela, Charles D., Orthopedic Surgery. Medical Education, University of New Mexico School of Medicine, Albuquerque, N.M., 1985. Internship, Michigan State University, Kalamazoo Center for Medical Stud-

ies, 1986. Residency, University of Missouri, Kansas City, 1990. Board certified.

PINE BLUFF

Mohyuddin, Adil Ibrahim, Oncology/Hematology. Medical Education, University of Tennessee, Memphis, 1987. Internship/Residency, University of Tennessee, Memphis, 1988/1990. Board certified.

VAN BUREN

Katz, Catherine A., General Practice. Medical Education, Dalhousie University, Halifax, Nova Scotia, Canada, 1968. Internship, Victoria General Hospital, Halifax, Nova Scotia, Canada, 1968.

OUT OF STATE

Blackburn, Roy M., Physical Medicine & Rehabilitation. Medical Education, American University of the Caribbean, Montserrat, British West Indies, 1987. Internship, St. Vincent's Medical Center, Staten Island, N.Y., 1988. Residency, St. Vincent's Medical Center and Emory University, Atlanta, Ga., 1993. Board certified.

Gregory, John Reeves, Orthopedics. Medical Education, Louisiana State University Medical Center, Shreveport, 1982. Internship/Residency, Louisiana State University Medical Center, Shreveport, 1978/1982. Board certified.

Melton, Charles Lewis, Cardiology. Medical Education, University of Texas Southwestern Medical School, 1980. Internship, King/Drew Medical Center, Los Angeles, Calif., 1981. Residency, King/Drew and St. Vincent's Medical Center, 1987.

Wren, Mark A., Physical Medicine & Rehabilitation. Medical Education, Tulane University School of Medicine, 1991. Internship/Residency, Loma Linda University Medical Center, Loma Linda, Calif., 1992/1995. Board certified.

RESIDENTS

Albin, Amy Wilson, Pediatrics. Medical Education, UAMS, 1996. Residency.

Baker, Karen F., Pediatrics. Medical Education, UAMS, 1996.

Beeman, David Lyn, Family Practice. Medical Education, UAMS, 1996.

Burton, Todd Michael, Pediatrics. Medical Education, University of Texas Medical School, Houston, 1996.

Cameron, Ricky Leon, Family Practice. Medical Education, University of Texas Medical Branch, Galveston, 1996.

Carr, Russell Shane, Family Practice. Medical Education, Louisiana State University School of Medicine, 1996.

Ceola, Ashley F., Radiology. Medical Education, UAMS, 1996.

Corbell, Mark Edward, Family Practice. Medical Education, UAMS, 1996.

Duffield, Robin Pilgram, Pediatrics. Medical Education, UAMS, 1996.

Eads, Lou Ann, Psychiatry. Medical Education, UAMS, 1996.

Fahr, Michael J. Medical Education, UAMS, 1996.

Frankowski, Gary A., Transitional. Medical Education, UAMS, 1996.

Gregory, James Minor, Radiology. Medical Education, UAMS, 1996.

Hodges, Michael Eugene, Family Practice. Medical Education, University of Texas Medical Branch, Galveston, 1996.

Hogan, Scott Matthew, Psychiatry. Medical Education, UAMS, 1995.

Iqbal, Imran, Internal Medicine. Medical Education, Sindh Medical College, Karachi, Pakistan, 1990.

Jackson, Hugh H., Family Practice. Medical Education, UAMS, 1996.

Jewell, Shannon A., Pediatrics. Medical Education,

UAMS, 1994.

Johnson, Brad D., Family Practice. Medical Education, UAMS, 1996.

King, David L., Family Medicine. Medical Education, University of Oklahoma College of Medicine, Tulsa, 1996.

Marchese, Sandra Marie, Dermatology. Medical Education, Northeastern Ohio University College of Medicine, Rootstown, 1996.

McMahan, Steven Howard, Family Practice. Medical Education, UAMS, 1996.

Nguyen, Larry Luong, Orthopedic Surgery. Medical Education, Baylor College of Medicine, Houston, 1996.

Slack, Tobin Alexander, Family Practice. Medical Education, Louisiana State University Medical Center, 1996.

Stewart, R. Todd, Internal Medicine. Medical Education, UAMS, 1996.

Storey, Mark R., Radiation Oncology. Medical Education, UAMS, 1996.

Vest, Carl Ernest, Family Practice. Medical Education, UAMS, 1996.

STUDENTS

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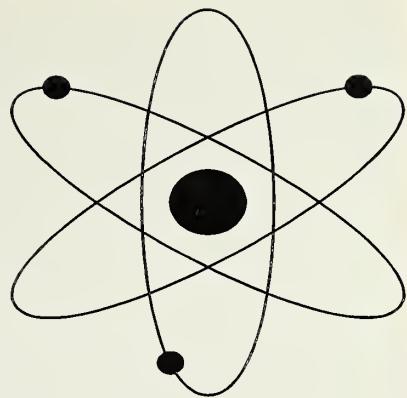
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Radiological Case of the Month



Jon A. Roberts, M.D.
David R. McFarland, M.D.
Mohammed M. Moursi, M.D.
Don Thomas, M.D.
David Harshfield, M.D.

HISTORY

A 63-year-old white male presented with abnormal noninvasive study of a left femoral to anterior tibial venous bypass graft. This was found on routine follow-up doppler examination. He was previously hypertensive and was found to develop mild renal failure after being placed on an ACE inhibitor(Captopril).



Figure 1



Figure 2

Figure 1: An abdominal aortogram was obtained as part of the arteriogram to evaluate the left femoral to distal bypass graft. This demonstrated a significant stenosis of the right renal ostium as was suggested by his clinical response to ACE inhibition. There is mild irregularity of the left renal artery without significant stenosis. There is mild irregular plaque in the infrarenal aorta.

Figure 2: Angiogram performed after balloon dilatation and stent placements.

Renal Artery Stenosis Secondary to Atherosclerotic Disease

DIAGNOSIS

Renal artery stenosis secondary to atherosclerotic disease.

TREATMENT

Correction of this stenosis was undertaken due to the patient's response to Captopril and hypertension. Utilizing a left axillary access, the right renal artery was catheterized with the stenosis crossed. The lesion was initially dilated with a 6mmx2cm angioplasty balloon. There was a moderate residual stenosis. Subsequently, a 6mm Palmaz renal artery endovascular stent was placed with no residual narrowing on the follow-up arteriogram.

DICUSSION

Renal artery occlusive disease is a commonly encountered problem. Hypertension can be caused by renal artery stenosis or worsened by it. Numerous studies have shown the adverse effects of occlusive disease on renal function.^{1,2} With these in mind, intervention of renal stenoses is now more prevalent. Current options include surgical endarterectomy or bypass and percutaneous procedures such as were performed in this case.

There have been several reports documenting the efficacy of the Palmaz renal artery stent.³⁻⁵ One of the biggest advantages it provides is the decreased elastic recoil which formerly was a problem in ostial lesions.⁵ Initial technical success is high and the restenosis is less than angioplasty alone. Restenosis occurs in some patients and is likely secondary to myointimal hyperplasia. Redilatation can be performed if needed and is usually successful.

Reports have shown various responses in blood pressure and renal function.³⁻⁵ Very few patients will be cured of hypertension but many have the number and/or dose of their medications decreased. The effects on renal function are more variable with some showing improvement, some not changing, and some even deteriorating. Some possible causes of worsened renal function include contrast nephropathy and cholesterol embolization induced by the procedure.

The usual approach for placement of a renal stent would be from the common femoral artery. In this patient, the axillary artery was utilized because of the threatened graft in the left groin and occlusion of the common femoral artery. The axillary artery is not as desirable for intervention because of the larger sheaths required. However, in this instance it was performed without complication and prevented the patient from having an abdominal surgery. Additionally, stent placement does not preclude future surgical bypass if needed.

In conclusion, percutaneous intervention with the Palmaz renal stent may be useful in patients with hypertension or renal failure and co-existent renal artery stenosis.

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Authors: Jon A. Roberts, M.D., is a vascular and interventional radiology fellow at UAMS. He will be joining Memphis Radiological, PC this month; David R. McFarland, M.D., is chief of interventional radiology at UAMS; Mohammed M. Moursi, M.D., is assistant professor in vascular surgery at UAMS and Don Thomas, M.D., is a senior resident in radiology at UAMS.

Editor: David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

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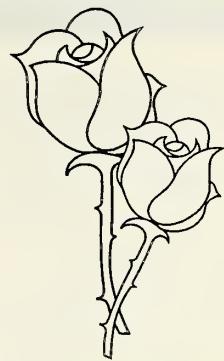
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In Memoriam

John F. Guenthner M.D.

Dr. John F. Guenthner, of Mountain Home, died Tuesday, May 21, 1996. He was 91. Survivors include his wife, Aileen; a son, Charles; one grandson; one great-grandson; four stepsons; 13 step-grandchildren; and five step-great-grandchildren.



Things To Come

July 31 - August 3

Arkansas Academy of Family Physicians - 49th Annual Scientific Assembly. Little Rock Excelsior Hotel & Statehouse Convention Center. For more information, call (501) 223-2272 or in-state 1-800-592-1093.

August 26 - 29

Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by UC Davis School of Medicine and Medical Center Division of Cardiovascular Medicine, Department of Internal Medicine and the Office of Continuing Medical Education. For more information, call (916) 734-5390.

September 6 - 7

3rd Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington Univ. School of Medicine. For more information, call 1-800-325-9862.

October 5 - 6

Lymphomas and Leukemia: Clinical Advances, Basic Science and Supportive Care Issues. J. Bennett Johnston Building, Tulane University Medical Center, New Orleans, LA. Sponsored by Tulane University Medical Center, Tulane Cancer Center, Center for Continuing Education and Nursing Resource Center. For more information, call (504) 588-5466 or 1-800-588-5300.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

October 17 - 19

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

November 1 - 3

New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 14 - 17

15th Annual Scientific Meeting - Pain and Disease: Causes, Consequences, and Solutions. Sheraton Washington Hotel, Washington, DC. Sponsored by the American Pain Society. For more information, call (847) 375-4715.

November 20 - 24

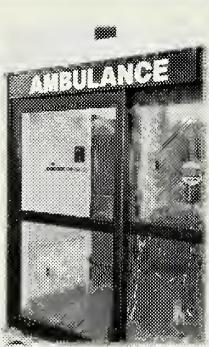
90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

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Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293
Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room 3 times a month, CARTI Auditorium once a month
LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuroradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109

VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

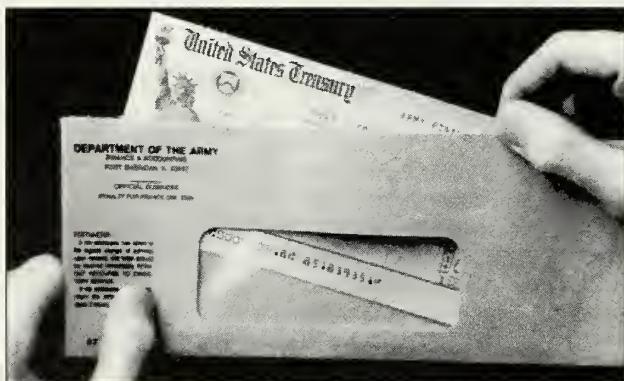
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 3

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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Cover photograph taken by A.C. Haralson of the Arkansas Department of Parks & Tourism.

Let's Build a Medical Care Delivery System Like We Built the Atomic Bomb

Alex Finkbeiner, M.D.*

Our federal and state governments have adopted a predictable approach to problem solving; particularly regarding social issues. An issue is identified (many times motivated solely for political gain but that's another essay); consultants are brought to committee meetings where data is presented and opinions expressed; debates ensue; compromises are made; a vote is taken and, if passed, monies are appropriated and the program (solution) is enacted and unleashed upon the American public as a mandate. Rarely is a well-defined outcome identified or means established to evaluate the effectiveness of the program. The programs are rarely field-tested and once instituted seemingly continue forever.

Pick up any Sociology textbook and you will find the first chapter devoted to defending Sociology as a science adaptable to scientific methods. I propose that sociological issues (medical care delivery is one) can, indeed, be addressed scientifically but are seldom done so by our governments.

During the flurry of activity of the first 100 days of Clinton's first term, Hillary Clinton was quoted (I paraphrase) "We are facing a medical crisis that will require the equivalent of the Manhattan Project to solve". Ignoring the word crisis as mere political hyperbole my reaction to her statement was the Clintons had learned something from history and would address social problems in a rational, scientific way. Of course, they didn't apply the principles of the Manhattan Project addressing medical care and the issue never came to fruition.

The Manhattan Project was the code name for the project to develop the atomic bomb in the early 1940's. I would argue that it is a paradigm of how governments should address problems; including social problems. The moral and ethical aspects of nuclear warfare is not an issue here. The issue is the methodology by

which problems are solved. Once a decision was made to develop the bomb, the government did it the right way.

First, the bomb was to be designed for a specific purpose; a specific outcome was defined. Next, two primary groups of individuals, the theoretical and the experimental physicists, were brought together isolated from congressional hearings and compromise to solve the problem. The theorists' role was to present historic data and theories extant regarding atomic physics in a reasoned and logical manner and submit theoretical approaches to solving the problem. The experimentalists then tested these theories, accepting those that were provable and applicable and rejecting those that were not. After many interactions of these two groups a functional bomb to meet the previously defined objective was designed. Before putting the device into service it was tested in a remote desert and only after successful testing was the bomb actually employed and only for a finite purpose (ending the war). When the original objective was met the project was disbanded.

If governments are intent to "solve the health care crisis" let us return to Hillary's suggestion and utilize the Manhattan Project paradigm.

First, define the problem and establish desirable, measurable outcomes or objectives.

Next, invite the theoreticians (eggheaded academic consultants and anyone else who has a theory) to outline alternative health care delivery systems to meet the previously defined objectives.

Pick five different systems, divide the United States into five regions, assign one system to each region and then experiment. By federal mandate all individuals within a region will receive their health care solely under the system assigned to that region for a finite time; lets say five years. In other words, each of the five regions will operate under one of the five health care delivery systems for five years.

The measurable outcomes are then evaluated at the end of five years to evaluate each program.

* Dr. Finkbeiner is Professor of Urology in the Dept. of Urology at UAMS. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

By field testing (experimentation) alternative programs (theoretical) and evaluating possible solutions based upon clearly defined and measurable outcomes we could then confidentially choose one program of health care delivery to be instituted nationwide with predictable results and a reasonable expectation of success. Further, outcomes would be continually monitored and, if the program fails to meet our objectives or if objectives change we would be willing and able to abandon that system and evaluate others.

Is it too farfetched to ask our governments to consider more rational approaches to problem solving through experimentation and outcome monitoring combined with the resolve to reject or discontinue programs that do not meet expectations? For medical issues the same scientific approaches utilized to understand the pathophysiology and treatment of diseases should be applied to the issue of how health care is delivered.

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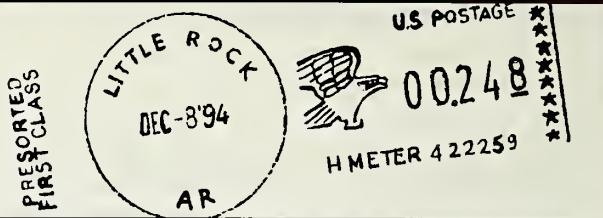
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Points Clarified Related to Article on Mercury in Fish

On behalf of the Arkansas Mercury Task Force, I would like to thank you for publishing the article concerning the problem of mercury in fish. As stated in the article, this is a problem with which we can learn to live. (The article, titled *Arkansans learning to live with mercury in fish*, was in the "Outdoor MD" section of Volume 92, Number 10, March 1996 issue of *The Journal*.)

The communication of technical issues is extremely difficult, often rendering it almost impossible to tell the whole story in a limited article. There are a couple of points related to this article which I feel need to be clarified.

1. The article states that only largemouth bass and catfish are affected. Actually, flathead catfish have been observed to have considerably higher concentration of mercury than other species of catfish. Most other species of catfish have low concentrations of mercury although the rule that larger fish have more mercury still holds.

2. Reference is also made to possible sources of the mercury problem. Most states have focused in on the possibility that mercury originates from the atmosphere which would mean that the likely source would be the burning of coal or wastes. Some states have gone as far as recommending that mercury emissions from such sources be controlled which would be very costly. Observations of the distribution of mercury in

sediments, rocks, and soils in Arkansas suggest the possibility that the source may be completely natural. For example, the analysis of over 700 rock samples from the Ouachita Mountains show that the average concentration of mercury is very near that of the sediment found in the Ouachita River. At this point, there is no firm answer as to the source but we are suggesting that it is important that we further evaluate the possibility that the source is natural before we spend massive amounts of money cleaning up atmospheric mercury emissions. Hopefully this can be done in the near future.

3. Some people continue to ask why the problem seems to appear in only certain locations. To explain this, one must understand that there are three things required to have a mercury problem. First, there must be a source; second, conditions necessary to produce methyl mercury must be present which usually means anaerobic sediments, third, a food chain which includes a predator fish (feeds on other fish) must be present. Remove any one of these factors and there is no problem. For example, even if mercury is present in river sediment, if the sediment is well oxygenated, there is not a problem.

I do not know if it is your policy to publish letters intended to expand on articles but I do think it would be appropriate for your readers to understand these issues.

**Joe F. Nix, Ph.D.
Chairman, Arkansas Mercury Task Force**

The Susan G. Komen Breast Cancer Foundation RACE FOR THE CURE

Presented by JCPenney

September 21, 1996 in Little Rock

For more information,
see page 121 and contact
the Race Headquarters at
Barbara Graves Intimate Fashions
(501) 227-5561

CORRECTION NOTICE:

The following group of physicians was listed in the previous (July) issue of *The Journal* in the "AMS Newsmakers" section without the proper information.

Christopher Adams, Little Rock; Lester T. Alexander, Pine Bluff; Ron William Beckel, Little Rock; Elizabeth Ross Chambers, Harrison; Jay Douglas Holland, Little Rock; Matthew Kyle McAlister, Mountain Home; Robert Lyle Morris, Harrison; Debra Jo Morrison, Little Rock; Mose Smith, Little Rock; Aubrey Lawrence Travis, Van Buren.

They are the May 1996 recipients of the Physician's Recognition Award which is awarded each month to physicians who have completed acceptable programs of continuing education.

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Medicine in the News

Health Care Access Foundation

As of July 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,229 medically indigent persons, received 20,484 applications and enrolled 40,293 persons. This program has 1,736 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

COBRA Cases and Definitions

During the June 21 Arkansas Hospital Association's (AHA) Administrators Forum meeting, Diane Mackey, AHA's attorney, gave a presentation related to a new wave of COBRA cases in Arkansas and across the nation. According to Mackey, plaintiff lawyers are trying to turn what should be malpractice cases into COBRA claims which are less costly and easier to win. Baptist Medical Center in Arkadelphia and Crittenden Memorial Hospital in West Memphis are currently embroiled in litigation concerning interpretation of these laws. Some of the definitions used in her presentation are listed below:

*Any individual who comes to the emergency department is defined broadly. There is no need for a patient to show indigency, eligibility for Medicare, or any bad motive by the hospital for the patient to be protected by the Act.

*Qualified medical personnel include those which the hospital defines by bylaws or rules and regulations. Because of assessment responsibility, the Health Department says a qualified medical person must at least be a Registered Nurse.

*Capacity means the ability of a hospital to accommodate individuals and includes numbers, availability of qualified staff, beds and equipment, as well as the hospital's past practice of accommodating excess capacity.

*Emergency medical condition manifests itself by acute symptoms of sufficient severity, including pain, psychiatric disturbances or indications of substance abuse which will, without medical attention, reasonably be expected to place the health of the individual (including an unborn child) in serious jeopardy, or serious dysfunction of any bodily organ or part, or if there is not time to transfer safely in the case of a woman having contractions or the transfer itself poses a threat to the health and safety of either mother or child.

*Hospital includes a rural primary care hospital. Participating hospital is one with a Medicare provider agreement.

*Stabilized means, if there is an emergency medical condition, that no material deterioration is likely, within reasonable medical probability, to result from or occur during a transfer or delivery.

*Transfer means movement (including discharge) of an individual outside the hospital's facility at the direction of a hospital agent, unless the individual is dead or leaves without permission.

*Appropriate medical screening examination within the capability of the hospital, including ancillary review routinely available at the emergency department means that screening which is usual and uniformly available to everyone presenting in similar condition at the ER. This has slightly different meanings in different jurisdictions.

Mackey suggested that should a hospital have no time to call an attorney, officials should check these definitions which will probably provide an answer, if read closely. Look at what is included, what is not included, and what duty must be met.

Reprinted from The AHA Weekly NOTEBOOK, Vol. 3, No. 26, an Arkansas Hospital Association newsletter, dated July 9, 1996.

Snell Lab Provides Coupons for Donation to Arkansas Chapter of ADA

Snell Laboratory and the American Diabetes Association (ADA) have teamed up to offer a special program to benefit the ADA and the diabetic population of Arkansas. The program will introduce coupons designed and printed by Snell for consumers of diabetic shoes. For each coupon redeemed (or each offer mentioned) at the time of any diabetic shoe purchase, Snell Laboratory will donate \$5 to the Arkansas chapter of the ADA in support of its programs.

Physicians may obtain coupons for their patients at any Snell Laboratory office or the American Diabetes Association. The coupons will also be available through Baptist Hospitals, St. Vincent's Infirmary and the Med Center in Little Rock, as well as other hospitals and diabetes education programs throughout the state. In addition, coupons will be distributed by the ADA at various in-service events for diabetics across the state.

As diabetics often lose feeling and sensation in their extremities, the feet are especially vulnerable and pose a continuing problem; a significant portion of cases at the Little Rock Foot Clinic are diabetic, said Terri Cohen, D.P.M. Cohen reports a case where a patient walked for a full day with a tack in his shoe before discovering it - and had done considerable damage to the sole of his foot.

"You can't be too careful with your feet when diabetes is in the picture. Twenty percent of diabetic hospital admissions are for foot problems and their treatment."

Dietary Supplement Can Be Fatal

The Food and Drug Administration (FDA) recently warned that the stimulant, ephedrine, which the FDA classifies as a dietary stimulant, can cause heart at-

tacks, seizures and psychosis. The warning followed the death of a college student who took an herbal product called ULTIMATE Xphoria, which contains ephedrine. The herbal product was described by the FDA as an imitation of the illegal drug called Ecstasy.

Reprinted from the Information for the Medical Community and the Public from the D.C. Board of Medicine newsletter dated May 1996.

Race for the Cure

On Saturday, September 21, 1996, Arkansas will hold its third annual Susan G. Komen Breast Cancer Foundation Race for the Cure, presented by JCPenney. Dr. Sandra B. Nichols, Director of the Arkansas Department of Health, has been chosen to serve as honorary chair of this year's Race.

"The Department of Health is proud to be a part of the 1996 Race for the Cure. While more white women in Arkansas are diagnosed with breast cancer each year, minorities are dying from it at a faster rate. To increase awareness of this problem, I would like to encourage community-wide involvement, including physicians and more minority participation, in the Race," says Dr. Nichols.

The Department of Health's Arkansas Breast and Cervical Cancer Control Program offers free mammograms, pap tests, and clinical breast exams to women who cannot afford them and are eligible for the program.

The race includes a 5K women's Walk/Run and a 2K family Walk/Run. Twenty-five percent of the proceeds from the race will be used to fund the national grant program of the Komen Foundation and seventy-five percent will remain in Arkansas to fund breast cancer research, education, screening and treatment.

The Komen Foundation is a national organization with a network of volunteers working through local chapters and Race for the Cure events in 65 cities throughout 35 states and the District of Columbia. It is now the largest series of 5K runs in the United States. Nancy Brinker established the Foundation in 1982 in memory of her sister Susan Goodman Komen who died of breast cancer at the age of 36.

The Arkansas race is underwritten by founding sponsor TCBY and a host of other local and national companies, organizations, and individuals. Start-up times are 8 a.m. for the 5K and 8:15 a.m. for the 2K Walk. The course will begin at the TCBY Plaza, Capitol Avenue and Broadway in downtown Little Rock.

Registration fees are \$12 per person through September 14, \$16 per person September 15 - 20 and \$20 per person on Race day. Barbara Graves Intimate Fashions, Breckenridge Village Shopping Center, I-430 at Rodney Parham Road in little Rock will serve as Race Headquarters this year for registration in person from August 26 - September 20 and packet pickup September 16 - 20.

In addition to the race itself, a complimentary reception will be held at the Arkansas Governor's Man-

sion on Friday, September 20, 4:30 - 6 p.m., 1800 Center Street, Little Rock. All survivors, sponsors and race participants are invited to attend. Also on Friday, September 20, 7 - 10 p.m., a Pre-Race Pasta Party and Silent Auction will be held at North Oaks, Crystal Hill Exit, North Little Rock, featuring the rock and roll sounds of Johnny Roberts and the Rockets and the extraordinary cuisine of Romano's Macaroni Grill. Tickets are \$18 for each registered participant and \$35 for all others.

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your office.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: June 12, 1996

*Elizabeth Annette Loyd Hill, LPN 23071 (Little Rock/Sheridan) REVOKE

*Tana Lee Waugh Murphy, RN 37228 (Little Rock) Probation - 2 years

*Sheila Jane Brown, RN 44119 (Little Rock/Lonoke) Probation - 2 years

*Linda Lucille Garrett, LPN 5585 (El Dorado) Probation - 2 years

DISCIPLINARY: June 13, 1996

*Kelly Suzan Driscoll, LPN 18641 (Sherwood) Suspension - 5 years; Fined - \$3,100

*Debra Kaye Abbott, LPN 12968 (McGehee/Rohwer) Probation - 18 months

*John Owen Jackson, RN 18232/CRNA 391 (West Memphis) RN license renewable - \$2,700 fine followed by 3 years suspension; CRNA Nat'l. Certification revoked; AR CRNA unrenewable

*Mary Gaye Wilson, LPN 32623 (Jonesboro) Suspension - 2 years; Fine - \$1,000

REINSTATEMENT:

*Jeannie Michelle Lewis, RN 39850 (Texarkana, TX)

*Joyce Yvonne Clayton Hammons, RN 31666 (Warren)

*Michael K. Ramsey, RN 22168 (Vilonia)

VOLUNTARY SURRENDER:

*Twylla Fontell Dihel, LPN 28842 (Salem) May 14, 1996

AMS Newsmakers



(left to right) Ernest J. Ferris, M.D. and Simmie Armstrong, M.D.

Dr. Ernest J. Ferris, professor and chairman of the Department of Radiology in the College of Medicine at UAMS, was one of three recipients of the 1996 Distinguished Faculty Award. Dr. Simmie Armstrong presented Ferris with the award. Ferris also was recently elected the 1996 president of the Radiological Society of North America.

Dr. Betty A. Lowe has been selected as the 1996 recipient of the Milton J.E. Senn Award & Leadership presented by the American Academy of Pediatrics. Dr. Lowe is a Fellow and past president of the AAP, professor of pediatrics at UAMS, associate dean for Children's Affairs at Arkansas Children Hospital (ACH), and Harvey and Bernice Jones Distinguished Chair in Pediatrics at ACH.

Dr. Nick J. Paslidis, who was a resident of Harvard Medical School, was one of 50 outstanding young medical professionals to receive the AMA/Glaxo Wellcome Achievement Award. The award recognizes exceptional leadership abilities in medicine or achievements in non-clinical community activities. In addition, Paslidis has completed a three-year AMA certification of CME and has been re-appointed for the second year in the American College of Physicians National Publications Committee.



Nick J. Paslidis, M.D.



(left to right) I. Dodd Wilson, M.D. and Joe B. Colclasure, M.D.

Dr. I. Dodd Wilson recently received a special recognition award to celebrate his ten years as Dean of the UAMS College of Medicine. Dr. Joe B. Colclasure, President of the Arkansas Caduceus Club, presented Dr. Wilson with a plaque displaying the inscription "In recognition of a decade of astute leadership, tireless commitment and dedicated service."

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of June 1996 are: Charles D. Barg, Little Rock; Robert W. Donnell, Rogers; Darren E. Flamik, Little Rock; Ricky W. Harrison, Russellville; David M. Johnson, Searcy; Gregory J. Lewis, Conway; Charles W. Logan, Little Rock; Salman N. Malik, Little Rock; Timothy W. Martin, Little Rock; Tom L. Meziere, Little Rock; Laura H. Nighorn, Fayetteville; Annette S. Slater, North Little Rock; Rondal D. Smith, Blytheville; Kim Graves, Dover; John C. Whitaker, Fort Smith; and Charlotte R. Willis, Little Rock.

Send your accomplishments and photo
for *AMS Newsmakers* to:

Arkansas Medical Society
Journal Editor
PO Box 55088
Little Rock, AR 72215-5088



New Member Profile

George Givens Miller, M.D.

PROFESSIONAL INFORMATION

Specialty: Cardiology

Years in Practice: Two

Office: Fayetteville

Medical School: University of Texas Medical School at Houston, 1984

Internship/Residency: University of Florida at Gainesville, 1985/1987

Volunteer Work: Worked for three years (1987-1990) in an indigent health care clinic in Beaumont, Texas

Honors/Awards: Outstanding Physician Award, Herman Hospital, Houston, Texas, and the Joe G. Wood Award for Excellence in Medicine.



PERSONAL INFORMATION

Children: George "Givens" Miller Jr., born August 1, 1989, great soccer player and Austin Daniel Miller, born September 18, 1991, he's currently learning the alphabet

Date/Place of Birth: August 30, 1958 in Snyder, Texas

Hobbies: shooting sports - especially sporting clays & skeet/trap shooting. Also enjoy all forms of hunting

THOUGHTS & OTHER INFORMATION

Historical Figures I most identify with: Ben Franklin and George Patton

Worst habit: Work too hard and strong-willed

Best habit: Work very hard and strong-willed

Favorite junk food: hamburgers and corn dogs

Most valued material possessions: my shotguns

People who knew me in medical school, thought I was: wild and crazy

The turning points of my life were when: The first turning point was when I married the most wonderfully loving woman. She has offered me unwavering support, counsel, guidance and friendship. The second turning point was my father's heart attack.

Nobody knows I: am very sentimental to my wife and family (like love story movies)

Favorite vacation spot: anywhere with my family

One goal I am proud to have reached: completing my interventional cardiology fellowship and making Fellow in the American College of Cardiology

Favorite childhood memory: the houses I lived in

When I was a child, I wanted to grow up to be: a dentist, since 4th grade

One of my pet peeves: Inefficiency!!

First job: pumping gas at L&L Gas Station in Snyder, Texas

Worst job: cleaning oil storage tanks and hauling hay

One word to sum me up: Driven!

My life philosophy: Be ever vigilant and relentless in trying to improve intellectually, in relationships and professionally

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Backflow Prevention Devices Required for Medical Facilities on Many Public Water Systems

Thomas L. Eans, M.D.*

The Arkansas Department of Health has required all public water systems to improve their provision of safe drinking water by eliminating all cross-connections from commercial and industrial establishments on their systems. Few doctors are aware of this law and how it affects them until they are served notice, and even plumbers may have an insufficient understanding of it and the valves it requires. There has been little publicizing of this information by the municipalities and the Health Department. This article is intended to inform clinic owners of their immediate and long term responsibilities under this new law and how the costs of it could be reduced, as well as to relate some aspects of the pre-existing State Plumbing Code for businesses of which these owners may not be aware.

Achieving and maintaining safe drinking water has been established as a national priority. The Cross-Connection Control Program resulted from amended Rules and Regulations for Public Water Systems passed by the Arkansas Legislature to conform to the National Primary Drinking Water Regulations. A cross-connection is a physical connection between a public water supply and either an unsafe or an objectionable material. Each municipality was required to pass an ordinance to have its water system institute an inspection and elimination program for cross-connections. The Arkansas Department of Health was directed to assess penalties against any noncomplying water system. There are no provisions specified for requesting an exemption by either the water systems or the users, although users can request an extension from their local water system. The Program was required to be in place by 1/1/96.

The purpose is to protect the public water supply from possible biological or chemical contaminants from

businesses that may pollute the public water lines. The pollution mechanism is through back pressure or back siphonage from the connection due to occurrences of reduction of pressure in the public water lines. The method of hazard elimination is to require certain business types to install a backflow prevention device on their inlet water line or to disconnect the business entirely from the public system. (Note this has nothing to do with the sewage drainage lines. This comes under other regulations.)

A business or industrial facility is said to have backflow potential if: 1.) There are actual or potential cross-connections; or 2.) There is intricate plumbing which makes it impractical to ascertain whether or not cross-connections exist; or 3.) There is an auxiliary water supply which is, or can be, connected to the potable water piping; or 4.) There is piping for conveying liquids other than potable water, where that piping is under pressure and is installed in proximity to potable water piping. The most obvious examples are a water hose connecting a faucet to a sink or container or running onto or under ground.

The Health Department recommended that each public water system determine where backflow potentials exist by inspection of the facilities. But to simplify their adherence to the law, many water systems have applied the decision universally to the Health Department's list of suggested High Hazard facilities without inspections and without specifying any appeal process. Therefore, this decision is often applied to facilities where backflow might happen under some future changed physical circumstances regardless of whether a cross-connection presently exists or has ever existed. The Health Department's representatives do support this action though. They emphasize this is a very litigious society, and the proper use of a highly reliable backflow device provides liability protection

* Dr. Thomas L. Eans, FAAFP, of Little Rock, is a family physician with subinterest in occupational medicine.

in the event some drinking water contamination occurs in the vicinity of your business.

All businesses are categorized as No, Low, Medium or High Hazard Potential. Table 1 describes these categories. Low Hazard ones must be inspected by the water system every five years to clarify their classification. Medium Hazard facilities are required only to have Double Check/Stop Valves on their inlet water lines, and they will be inspected by the water system every three years. High Hazard facilities must have a Reduced Pressure Zone (RPZ) valve or an Air Gap on their inlet water line, and its function must be checked annually. (An Air Gap is an impractical device for medical facilities and will not be discussed here.) **Medical clinics are categorized as High Hazard by many water systems** as Table 2 shows. They share this category with many other businesses, a partial listing of which includes golf courses, car washes, washaterias, sewage treatment plants, hazardous waste facilities, farms handling certain hazardous chemicals, commercial poultry houses and livestock pens, mines, marinas, mortuaries, schools with laboratories, bath houses and tattoo parlours. (The Program applies only to businesses, but the State Plumbing Code requires annually inspected RPZ valves on residential fixed lawn sprinkler systems also and screw-on vacuum breakers on all hose bibs. Any old such fixtures must eventually be brought up to that code. The Code also is relied on to cover other facilities not in this program such as those for non-commercial livestock and poultry.)

Medical clinics are assumed to have instrument wash sinks, lab sinks or lab instruments where a potential for a cross connection to a contaminant fluid could exist. They also are assumed to have an x-ray processor with its wash tank connected to a water faucet and in the proximity to fixer and developer fluids "under pressure" from their pumps such that a cross-connection could exist. Whether through this analysis or none at all, **many, water systems have decided that all clinics must have an RPZ valve**, even if there are no such lab instruments on plumbing or hoses on sink faucets or any x-ray processors at all. If it has a processor being fed water through simple back flow protection devices on a loop well above the water inlet, and the routine air gap gravity feed exists on its inlet spout, the clinic still must have an RPZ valve.

Table 1
Categorizing Businesses For Backflow Potential

Low Hazard--Any facility where the substance which could backflow is objectionable, but does not pose an unreasonable risk to health, and there is no possibility of backpressure in the downstream piping system.

Medium Hazard--Same as Low Hazard except there is a possibility of backpressure in the downstream piping system.

High Hazard--Any facility where the substance which could backflow is hazardous to human health.

This Program does not require internal facility modifications to protect employees and customers from being exposed to polluted water, but the State Plumbing Code does. This can be by use of vacuum breakers and check/stop valves on the inlet water line to the apparatus in question;

eg x-ray processors. These cheaper devices can't easily be checked for function and don't have to be, but annual inspection and maintenance is required by a licensed plumber. Replacement kits for their simple internal parts are available. An RPZ valve has a complicated design including connections such that a pressure checking device can be attached to verify its proper functioning of preventing backflow even under back pressure. Replacement kits for RPZ internal parts are available. The rules for its inspections are described below.

An RPZ valve must be in a loop between twelve and thirty inches above the ground or floor. It may be installed anywhere on the facility inlet water line before its first outlet. It can be inside the building to prevent theft and freezing, but it should be realized that it will open and may release water onto the floor if the municipal system's pressure is lost. If placed outside it is important to realize it is more susceptible to freezing and subsequent breaking than a simple water line above the ground would be. An insulated cover can be placed over it. It can then have an electric heat filament wrapped around the RPZ or a small light bulb hung inside the cover to give better freeze protection. A concrete foundation can be poured to enable attachment of the cover to the ground to make the valve and cover more secure from theft.

Insulated covers are available from plumbing supply houses for up to \$500 depending on whether it has a built-in heater. But you can have a sheet metal worker build a simple one for \$60-\$90 and consider having an electrician install power and a receptacle to the site. The valve is usually purchased in a size according to your inlet water line size. A 3/4" RPZ valve costs \$115-\$200 and must be installed by a master plumber, which will cost \$75-\$100. If concrete is poured with attachments, that is extra. A strainer(Y clean-out) that protects the RPZ from being blocked by water line debris costs about \$22. This is cost effective because if the RPZ has to be cleaned out, you will have this expense plus the cost of retesting it then. An air gap drain may also be offered to you. It is just a funnel

that is attached under the valve to catch and drain off the water if the valve opens, and it costs about \$13 if desired. All of these are available from plumbing supply houses.

After installation a health department certified RPZ tester, who does not have to be a plumber, is required to test the RPZ function. This costs \$35-\$85. Your water department can give you a list of local testers or may test it themselves. Copies of the test form including your valve manufacturer's model and serial number must be sent to your water department and the Arkansas Department of Health. Annual testing thereafter is required. Your water department usually will send a notice when this is due. Any repairs on the device must be done by a plumber certified as a Repair Technician for RPZ's.

This Program may appear to be arbitrary and without sound justification as applied by many water systems to medical clinics and perhaps to other businesses as well. Nevertheless, nonconformity is not a viable option. The Program's Health Department representative

Table 2
A Partial Listing of Some Water Systems' High Hazard Category Of Backflow Potential

Medical Clinics	Hospitals
Dental Clinics	Nursing Homes
Chiropractic Clinics	Laboratories
Veterinary Clinics	

has recommended that if you think there is an inappropriate high hazard categorization of your business, you could write to the department's Division of Engineering asking them to review their recommendations and

also write to your public water system asking them to inspect your facility.

References:

1. Arkansas Department of Health Rules and Regulations Pertaining to Public Water Systems, Revision Effective 4/23/95.
2. Arkansas Department of Health Minimum Standards for a Cross-Connection Control Program, Revised April 1996.
3. Little Rock Water Department, notice received.
4. Heber Springs Water Department, notice received and personal communication.
5. C & C Sheet Metal, 7102 Mabelvale Cutoff, Little Rock, Arkansas, bid and construction.
6. Allied Plumbing Supply, 6300 Murray, Little Rock, Arkansas, personal communication.
7. Various plumbers, personal communication.

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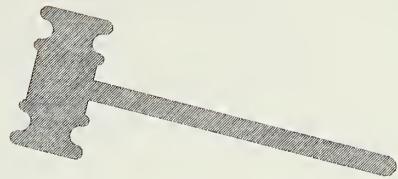


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Basic Rules for being a Witness



David L. Ivers, J.D.*

In our last column we looked at how physicians should prepare themselves for their role as expert witnesses. Now it's time to discuss what to do when the questions start coming. What follows are basic guidelines for any witness, lay or expert, followed by a word of advice to experts in particular:

1. Tell the truth. No exceptions.
2. Listen carefully to each question before you answer. Take your time. You will feel pressured to answer quickly, particularly on cross examination, but resist it. Make sure you understand the question. If you do not, say so.

3. Answer only the question that is asked, usually with a "yes" or "no" answer if possible. Then STOP. Do not volunteer information, as this may make your answer objectionable or make you appear biased. If an explanation is needed say so.

4. If an attorney tries to limit you to a "yes" or "no" answer when you feel that an explanation is essential, simply say you cannot answer the question "yes" or "no." Usually the judge will let you explain, but even if he or she doesn't, the jury will get the message.

5. Don't guess and try not to preface your answers with "I think" or "I believe." Give positive, definitive answers whenever possible. Don't speculate. If you don't know, say so. Experts in particular should be careful not to give medical opinions outside their specialties.

6. Be wary of overbroad generalizations and absolutes that may later come back to haunt you. Words like "always," "never" and "nothing" carry red flags. Instead of "Nothing else happened," say "That's all that I recall." Don't let an attorney pin you down to an exact answer if you are not sure. For example, don't say you received a call from a patient at 11:15 p.m. if all you really recall was that it was somewhere between 11 and 12.

7. If you realize your answer was wrong or unclear, correct it immediately. At an appropriate pause

in the questioning, you can simply say, "I realize now that something I said earlier needs to be corrected."

8. Always be polite, even if the attorney is not.
9. Beware of questions that paraphrase your answers. These questions frequently begin, "Wouldn't you agree that ...?" The lawyer may have changed your meaning in ways you did not notice. You are entitled to say that you would rather stand on your answer and stick with it the way you worded it.

10. Stop instantly when an attorney objects or the judge interrupts you. You will have an angry judge on your hands if you try to sneak in an answer. Also, the attorney who called you will often use an objection as a signal that danger is ahead, and many times the objection will clue you in to the danger so that you can avoid it.

11. If you are going to testify concerning records, familiarize yourself with them. Be able to refer to them easily if you need to do so while on the stand.

12. Don't be afraid to admit that you talked to a lawyer or that you are being paid for your time. Good attorneys always talk to their witnesses before they testify, and it is accepted practice for experts to be paid for their valuable time.

Experts Beware

Probably the hardest thing for any expert is to learn to speak in plain English. Jargon is a part of any specialized field and the practitioners in those fields forget how completely foreign the language is to outsiders. As one commentator has put it: Instead of saying "Mr. Krueger suffered a lesion to the left motor cortex of the cerebrum," say "Ed Krueger's head hit the dashboard so hard that the impact literally caused a tear on the side of his brain that has turned into scar tissue." If you don't translate all the high-sounding terms into everyday words, you might as well save your breath and the court's time.

Sources:

1. Walter J. Matt and John E. Nagurney, "Suggestions to Witnesses," Buffalo, N.Y., Bar.
2. James W. McElhaney, *McElhaney's Litigation* (1995).

* David L. Ivers, J.D., is an associate with Mitchell, Blackstock and Barnes in Little Rock, general counsel for the AMS.

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Cover Story

Dramatic changes are taking place in the Twin Cities

Tyler Hardeman*

The Greater Little Rock area is on a roll. This should be a good year to visit the Arkansas capital and its twin, North Little Rock across the Arkansas River, to see both cities as they undertake some dramatic changes.

Thanks to the passage of a one year, one cent sales tax combined with a previous \$30 million bond issue, Little Rock and North Little Rock are busily engaged in revitalization efforts that will impact both sides of the river.

In Little Rock, the Statehouse Convention Center is being doubled in size, from its present 62,125 feet to an expanded 112,520 feet. The convention center will extend eastward from its present site, thus requiring the rerouting of the Main Street Bridge over the Arkansas River.

Farther to the east on Markham Street, a year-round farmer's market has recently opened. At the River Market one will find just about anything from fresh herbs and flowers to fresh custom-cut and smoked meats.

Just beyond the River Market, the former Terminal Warehouse, being renamed the Museum Center, will serve as the new home of the Museum of Science and History as well as offices and shops. In the same area, Fones Brothers warehouse, which has stood vacant for many years, has been gutted and is being transformed into the main branch of the Little Rock Public Library.

* Tyler Hardeman is the travel editor for the Arkansas Department of Parks and Tourism.

A pedestrian mall and grand entrance to Riverfront Park is also part of the plans, as is an expansion of facilities available for performers in Riverfront Park's amphitheater.

Throughout 1996, a favorite stop for visitors to the capital city will not be open for tours. The Old State House, Arkansas' first state capitol building dating from 1836 has been shuttered to allow extensive repairs to damaged walls, foundations and supports. Deterioration had advanced to the point where the building was becoming dangerous, according to the Department of Arkansas Heritage which maintains the build-

An Historical Note

The origins of Little Rock date back to 1722, when French explorer Benard de la Harpe stepped ashore at an outcropping of rock on the south bank of the Arkansas River. It was here that the native Quapaw Indians traditionally crossed to the other side. La Harpe gave the outcropping - and thus the city - its unusual name to distinguish it from Big Rock which rises upstream on the North Little Rock side. History lies on every hand in the Twin Cities.

ing and its collections. The Old State House, widely acknowledged as one of the finest examples of Greek Revival architecture in the U.S., closed on April 1, 1996. It will remain closed until renovation has been completed; an estimated 14 months with projected completion in June of 1997.

In North Little Rock, efforts by its Main Street program are bearing fruit in several downtown blocks where residences are being refurbished and upgraded. Most excitingly, a new multi-million-dollar 18,000-seat covered sports and entertainment arena is being planned for an area between downtown and I-30. There are also plans for further development of the city's

Riverfront Park.

The Delta Queen Steamboat, which inaugurated Arkansas River cruising in 1994, has returned for a series of visits to the Twin Cities which began in May and is scheduled to extend into November. New this year is a visit to Tulsa's Port of Catoosa, the first time in history that a steamboat has penetrated that far upstream on this major Mississippi River tributary.

But while all these new and exciting changes are underway, there are still a number of traditional attractions in the twin cities ready to welcome visitors. The Arkansas Territorial Restoration, a collection of 14 buildings dating from the 1820 to 1840 period of settlement is located at Third and Scott Streets in Little Rock. Living history programs that bring to life episodes from early territorial days are featured as well as an Arkansas artists' gallery, craft shop and Cromwell Hall, where items from the Restoration's permanent collection are exhibited on a rotating basis.

Other attractions in Little Rock include: the Arkansas Arts Center, located in MacArthur Park, offering a superb permanent collection of drawings, oils, watercolors, and sculptures as well as traveling exhibitions (there's also an acclaimed Children's Theatre, a weekday luncheon restaurant and a gift shop); the Museum of Science and History, located in the 1838 Tower Building next door until its move to the Museum Center, focuses on early Arkansans and the Native Americans who once occupied this land (the building was the birthplace of General Douglas MacArthur while his father was commandant of the Little Rock Arsenal); and the Decorative Arts Museum, where contemporary crafts and other decorative items are exhibited in one of Little Rock's earliest and most impressive structures. The Decorative Arts Museum occupies the grand Pike-Fletcher-Terry mansion which was built by noted early adventurer and author Albert Pike. It also served as the boyhood home and subject for Pulitzer Prize-winning Imagist poet John Gould Fletcher. The State Capitol, a handsome, domed structure which commands a rise west of the downtown area, offers audiotape and guided tours of legislative chambers and changing exhibits.

The Children's Museum of Arkansas in the Union Train Station offers a variety of imaginative exhibits that encourage creativity and learning, and the Aerospace Education Center with its IMAX Theatre brings the excitement of space travel home to Arkansas audiences. A six-minute film on the state and city is shown with each featured big screen attraction.

The Quapaw Quarter reflects 19th century life in Little Rock. A grand collection of antebellum and Victorian

houses has been restored for offices, apartments and single-family dwellings. The 1880 Italianate Victorian Villa Marre at 14th and Scott Streets is headquarters for the Quapaw Quarter Association and a museum tour home. If the house looks familiar, it's because it served as the studio of the Sugarbakers in the hit CBS comedy "Designing Women."

On the cultural front, the capital city has much to offer. Audiences have opportunities to enjoy first rate theatre at the Arkansas Repertory Theater, Weekend Theatre, Community Theatre of Little Rock and Murry's Dinner Playhouse. There's also Ballet Arkansas, the Arkansas Symphony Orchestra, which performs a sophisticated season of classical and pops concerts at the Robinson Center Music Hall, and Wildwood Park for the Performing Arts which is rapidly expanding its offerings of music festivals and other special events.

Among Little Rock's park facilities are War Memorial, featuring a public golf course, the Little Rock Zoo and a stadium where the Razorback football team plays several of its rivals each year; Rebsamen Park public golf course; as well as Murray, Boyle and Allsopp parks that offer a variety of outdoor experiences for hikers, joggers, fishermen and picnickers. In addition, there is Pinnacle Mountain State Park - an ecologically oriented park on the edge of Little Rock's urban sprawl. The park encompasses an Arkansas river landmark which has served as a beacon for sailors since the first explorers ventured upriver in the 1700s.

In North Little Rock, one will find a number of attractions. "The Spirit" excursion boat operates from a permanent dock in Riverfront Park providing sightseeing and dinner cruises on the Arkansas River. Wild River Country is another popular destination here, where everything is themed to water activities.

The Old Mill, a recreation of 19th century grist mills, is tucked away in the hilly Lakewood residential area north of I-40. The picturesque mill is frequently used as a backdrop for weddings and fashion shoots. It's a great place for a family picnic with grounds maintained by the Master Gardeners program.

A special treat in North Little Rock is enormous Burns Park, one of the largest urban green spaces in the country with over 1,500 acres. The park offers golf, tennis, camping, hiking, carnival rides, a water slide, ball fields, a motocross course, launching ramps and more.

There is much more to be found in the twin cities as well as the entire state. For additional information, contact the Heart of Arkansas Travel Association, PO Box 3232, Little Rock, AR 72203, or the Arkansas Department of Parks and Tourism, One Capitol Mall, Little Rock, AR 72201, phone: 1-800-NATURAL.

The State's Newest Family Practice Residency Program Comes of Age

George M. Finley, M.D.*
Rebecca Hyatt, B.S., C.P.M.**



There's a new kid on the block, and it is Southwest Family Practice Residency and Clinic in Texarkana! On June 27, 1996, the new clinic and residency program - which is part of the University of Arkansas for Medical Sciences, Area Health Education Center Southwest (AHEC-SW) - graduated its first class of family practice residents (pictured above from left to right: Christopher T. Smith, Paul D. Sarna, Shanna Hill Spence and Jesse D. Moore). The new residency program is positioned to serve southwest Arkansas and northeast Texas with medical professionals for years to come.

Background

Actually, the Clinic and Residency Program are new, but AHEC-SW is not. AHEC-SW is part of UAMS' statewide network of AHECs serving every corner of the state, with locations in Fayetteville, Ft. Smith, Jonesboro, Pine Bluff, El Dorado, and Texarkana. The AHEC concept first entered the National spotlight in 1970 when the Carnegie Commission published a report, "Higher Education & the Nation's Health." AHECs were conceived as satellite educational programs, developed as an extension of, but at a distance from, major health sciences campuses. The concept developed in answer to a grave need in Arkansas and other states in the 1960s to retain physician graduates and for placement of physicians in rural areas. At that time only about 40% of UAMS graduates remained in Arkansas, and many of those stayed in the Central Arkansas area. Arkansans outside the central area desperately needed better access to medical care.

Under the leadership of then-Governor Dale

Bumpers, Roger Bost, M.D. who was Director of the State Department of Human Services, and supporters in the Arkansas General Assembly, the Arkansas AHEC Program was born during the 1973 legislative session. Within three years six centers were established including AHEC-SW. The goals of the AHEC program are:

*To enhance the quality of primary health professions education by utilizing the best academic resources available statewide.

*To improve the supply and distribution of Arkansas health professionals, especially primary care providers.

*To retain more UAMS graduates in Arkansas.

*To promote cooperation and coordination among communities, health care providers, educational institutions, and health related organizations.

*To improve the health status of Arkansans by providing professional support and continuing education for practicing health care providers and by offering health education programs to the public.

Since 1975 AHEC-SW has developed and operated a full service medical library which is comparable to a medical sciences center with access to the National Library of Medicine's computerized service, Bibliographic Retrieval Service, and other resources for medical reference information. The library maintains a collection of more than 1500 monographs, 200 medical journal subscriptions, an audiovisual library, and has access to the Hospital Satellite Network. The library services are available to all health professionals and students in the southwest area.

AHEC-SW has offered Continuing Medical Education opportunities to over 300 area physicians, 14 hospitals, and 4 schools of nursing. Sponsored courses are approved for AMA and AAFP CME hours. A variety of conferences are scheduled by AHEC-SW and attended by local and area physicians. AHEC-SW par-

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** Rebecca Hyatt, B.S., C.P.M., is Director of Development and Research at AHEC-SW in Texarkana.

ticipates in the UAMS Rural Preceptorship Program, the Family Medicine Clerkship and Junior & Senior Medical Student Rotations.

Three Allied Health programs through UAMS College of Health Related Professions are currently offered at AHEC-SW for area students. Both Associate of Science and Bachelor of Science degrees are offered in Radiologic Technology, with pre-professional curriculum available at Texarkana College. The professional portion of the curriculum is offered at AHEC over twenty-four continuous months of full-time coursework. AHEC's Department of Respiratory Care offers an Associate of Science degree over seventeen continuous months and CRTT-to-RRT program over seven continuous months. Clinical experience accompanies classroom and laboratory coursework. The UAMS College of Health Related Professions offers a Bachelor of Science Degree in Medical Technology with a senior year internship available through AHEC-SW at St. Michael's Health Care Center. AHEC-SW in collaboration with the UAMS College of Nursing participates in RN to BSN to MNSc outreach programs which enables nursing students to acquire a BSN off campus and obtain academic credit toward graduate level programs. A local pharmacist also supervises UAMS pharmacy students, teaches UAMS graduate courses, and instructs Respiratory Care students in pharmacology.

AHEC-SW is included in UAMS' Compressed Video Network which provides telecommunication technology for distance learning which is the provision of basic and continuing education to distant students. The technology allows interactive audiovisual communication between individuals located at different sites.

Need for Residency

Although the other five AHECs in the state established family practice residency programs from 1975 to 1980 with state funding, only AHEC-SW remained without a residency program. The nine counties of the AHEC-SW region had no direct access to a family practice residency program.

The AHEC-SW program has always relied heavily on its support from the medical community. Therefore, the first step in a residency program feasibility study was an assessment of medical community sup-

port. AHEC-SW faculty attended section meetings in the specialties of family practice, surgery, medicine, and pediatrics and the residency program proposal was placed before these committees. There was overall agreement that the Texarkana area could support a residency program. Physicians felt that the community of Texarkana, as well as surrounding counties, would benefit greatly from a residency program. More than 50% of those attending the section meetings indicated they would be willing to provide teaching assistance.

Both St. Michael Health Care Center and Wadley Regional Medical Center were represented at the various section meetings and voiced their support. A third Texarkana hospital, Medical Arts, also embraced and supported the residency concept. Each section voted unanimously to support the initiation of a residency program. Thus, a broad base of enthusiastic support existed for the family practice residency program in southwest Arkansas.

In support of the local assessment of need, the federal designation of Medically Underserved Area applied to part or all of each county in the AHEC-SW region. All or part of six counties in the region had the federal designation of Health Professional Shortage Area. In 1991 Lafayette County, Miller County's neighbor to the east, had the dubious distinction from the Arkansas Department of Health of being the number one priority in Arkansas in need of health care services. Since 1987 four hospitals in the AHEC-SW service area had closed — two in Arkansas (Gurdon and Lewisville) and two in Texas (Naples and Lone Star). Health care providers frequently avoid or abandon practice locations due to lack of hospital services and feelings of isolation. Conversely, hospitals suffer financial trauma and may even close due to a shortage of providers. Therefore, local training programs, the provision of adequate continuing education, and professional support systems for rural providers were essential.

Residency is Born

Dr. Herbert Wren, Director of AHEC-SW, set a goal to establish a family practice residency program at AHEC-SW. In October 1988 he hired Dr. George M. Finley, who had a private family practice in Hope, to spend 20% of his time working with the AHEC program. In the early 1990's the two doctors won enthusiastic support from the hospitals and medical com-

munity in Texarkana, as well as, Dr. Charles Cranford, Executive Director of the state's AHEC program, the directors at the other five AHECs in the state, and Dr. Geoffrey Goldsmith, Chairman, UAMS Department of Family and Community Medicine. Senator Wayne Dowd, Representative David Beatty, and others worked with then-Governor Bill Clinton and later, Governor Jim Guy Tucker to obtain two years of funding from the Governor's office. Dr. Finley wrote a three-year grant application to the federal Bureau of Health Professions for a "Grant for Graduate Training in Family Medicine" which was funded in 1993.

Plans were made for a clinic in Texarkana and for residents to practice at Southwest Arkansas Comprehensive Care Clinic in Lewisville, operated by CABUN Health Services, a Community Health Center at Hampton, Arkansas. Residents were recruited from the Junior Clerkship program already in place and provisional accreditation was given. The first residents (four) came aboard and the Southwest Family Practice Residency and Clinic opened July 1993.

AHEC-SW has grown from six employees in 1988 to sixty-three (including residents and preceptors) in 1996. The number of residents in training increased from four in 1993 to twenty in July, 1996. The program now accepts six residents per year for the three-year program, and specialists who want to re-train in family practice. (Two are currently enrolled.)

Dr. Wren retired June 30, 1995, and Dr. Finley was named AHEC-Southwest Director. Dr. Russell Mayo is full-time faculty and six family practice physicians are part-time faculty. The volunteer specialists who provide placements for clinical rotations are essential to the residency program, the health-related professions, and the Junior and Senior clerkships.

The Family Practice Residency offers residents excellent training in a broad-based curriculum that includes rotations in Adult Medicine, Pediatrics, Obstetrics, Emergency Medicine, Cardiology, Surgery, Diagnostic Imaging, Ortho/Sports Medicine, Family Practice, Gastroenterology, Cardiac Care/Pulmonary, Ophthalmology/ENT, Urology, Gynecology, Practice Management, Community-Oriented Primary Care (COPC), and electives. A spirit of team work is essential for the success of the program, and residents participate in a number of weekly conferences, journal clubs, and residents' meetings. The concepts of Family Practice and total care of the patient are stressed in all areas. The rich experiences and educational opportunities offer the residents growth in personal and professional maturity. Upon completion of the residency program, the graduates are well-trained and equipped to enter into any contract, attain appropriate privileges, and provide care in basically any setting (rural, urban, aca-

demic). The physician will be able to move into any medical community as an equitable partner, leader, and professional.

AHEC-SW and the Southwest Family Practice Residency Clinic are located in the former Southern Clinic Building. Renovations are currently in progress to update the building, increase the number of exam rooms, accommodate new computer technology, move all the AHEC services under one roof, and provide additional space for the rapid growth AHEC-SW has experienced. In addition to the Texarkana clinic, second- and third-year residents practice half a day each week at Southwest Arkansas Comprehensive Care Clinic (SWACC) in rural Lafayette County. This experience provides residents first-hand knowledge of rural practice as well as practical involvement in the COPC model. COPC is a process in which health problems of a defined population are systematically identified and addressed, combining the principles of primary care, epidemiology, and public health. In the COPC rotation residents are able to assess the community's health needs and develop an interest in rural health with such activities as spending time with the county construction superintendent, learning beaver control to manage local flooding, water drainage projects, local police work, the impact of farming on injuries and chemical exposure, school health issues, and sports health.

Expectations for the Future

What does this residency mean for southwest Arkansas and the state as a whole? Studies have shown that physicians frequently locate practices in areas where their residency training occurred. This has certainly been the case with our first graduating class of four physicians. Three are planning to practice in Texarkana and one will join the community health clinic at Augusta, Arkansas. The residency expects to provide physicians (and other health related professionals) not only in the nine-county region of AHEC-SW, but also in the four-state area of northeast Texas, southeast Oklahoma, and northwest Louisiana because of the proximity of Texarkana to these areas. AHEC-SW will also contribute to the pool of physicians trained in the Arkansas AHEC network to provide placements in both urban and rural locations over the state.

This residency provides a unique opportunity for physicians to learn through the COPC model to address health concerns of the community and to provide leadership in addressing and evaluating those concerns. As the medical community participates increasingly in managed care arrangements, prevention and the health of the denominator population become even more important. Physicians trained at AHEC-SW are positioned to meet these new challenges.

To
those physicians who volunteer
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Thank You!
*As you can see from a sampling of
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involvement in our program is
appreciated and in many
cases life-saving.*

It has been three days since you sent me to the doctor and I have a ways to go to be 100%, but I can breathe and walk across the room now. I had given up hope almost, and I remembered Arkansas Health Care. The doctor gave me two of the medicines I needed and the pharmacy you sent me to filled the antibiotics. Your doctor even "chewed" me out for not coming in two weeks previously. I'm starting to feel good again. God bless you.

I would like to say thank you first of all. Your program made it possible for me to have a mammogram when I had no where else to turn. I did not realize there was such a program. ...it is a much needed program. Thanks again.

Western Wildlife
As Easterners moved West, pioneers found animals as exotic as the landscape... buffalo, prairie dogs, bears, beavers, moose, sheep, cougars, wolves and rattlesnakes. The eagle became a national symbol.

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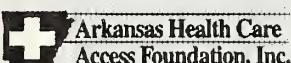
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Invasive Non-typeable *Haemophilus influenzae* Diseases in Children

Gordon E. Schutze, M.D.*
Stephen F. Garrison, M.D.**

Abstract

The current approach to patients with invasive non-typeable *H. influenzae* disease is based upon past experience with the type b strains. In areas where clinicians cannot obtain typing information in a timely manner, issues concerning treatment and prophylaxis should be approached as if the patients were infected with a type b strain. This approach will not change until further information becomes available on invasive non-typeable *H. influenzae* infections in children.

Introduction

Invasive disease due to *Haemophilus influenzae* has become uncommon in the United States since the advent of the *H. influenzae*, type b (HIB) vaccines. These vaccines however, are not effective in preventing illnesses due to the non-typeable strains of this organism. Non-typeable *H. influenzae* are part of the normal colonizing flora of the oropharyngeal cavity and are a recognized cause of such local disease as otitis media, sinusitis, and bronchitis in children and adults and more invasive disease such as bacteremia and meningitis in the newborn. Prior to the development of the HIB vaccine, approximately 95% of cases of *H. influenzae* meningitis and bacteremia in children older than 3 months of age were caused by the type b strains, while the remaining 5% were due to the non-typeable strains.¹ Recently however, non-typeable strains have been found to be responsible for an increasing number of cases of bacteremia and meningitis.² Due to the success of the HIB vaccine, a large proportion of invasive *H. influenzae* disease encountered by clinicians today will be due to the non-typeable strains. Clinicians should be familiar with this organism and the proper approach to the management of patients with invasive disease.

Case Report

An 11-month-old white female presented for medical

evaluation with a chief complaint of fever, cough and congestion. While in the waiting room, the patient had a generalized tonic-clonic seizure which lasted approximately five minutes. Physical exam revealed a somnolent, febrile (103.4°F) child with an inflamed right tympanic membrane. Laboratory evaluation revealed a right middle lobe infiltrate on chest roentgenogram, a white blood cell count of 23,100/mm³ with 50% neutrophils, 32% bands, 10% lymphocytes, 5% monocytes, 2% atypical lymphocytes and 1% monocytes. Cerebrospinal fluid evaluation revealed 0 white blood cells, a protein of 20 mg/dl (range: 20 - 70 mg/dl), a glucose of 77 mg/dl and a negative Gram stain. Past medical history was remarkable for a sepsis evaluation and three days of antimicrobial therapy at birth for persistent leukocytosis and a 3 day hospitalization for a pneumonitis at 7 weeks of age. The patient had received Hib TITER (Lederle-Praxis Biologicals) at 2 months of age, and Tetramune (Lederle-Praxis Biologicals) at 4 and 6 months of age.

The patient was admitted to the hospital and was administered cefotaxime (240 mg/kg/day). Non-typeable *Haemophilus influenzae* was isolated from both blood and cerebrospinal fluid culture. Repeat lumbar puncture on the 3rd day of illness revealed 720 white blood cells per mm³ with 98% neutrophils, a protein of 43 mg/dl, a glucose of 5 mg/dl and a negative Gram stain and culture. The patient received a 14 day course of cefotaxime prior to discharge. Immunologic evaluation demonstrated a serum IgG level of 650 mg/dl as well as normal serum levels for age of IgA, IgM, and IgG subclasses. Audiologic follow-up demonstrated a mild to moderate hearing loss bilaterally which was felt to be related to middle ear effusions rather than sensorineural hearing loss. Typing results by the Texas Department of Health verified the organism to be a beta-lactamase producing non-typeable *H. influenzae*, biotype III.

Discussion

Non-typeable *H. influenzae* are part of the normal flora in the upper respiratory tract of children and have been described to colonize from 20%-80% of children

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at any one time. Recently however, the ability to discriminate strains of non-typeable organisms by outer membrane protein analysis have enabled investigators to better understand the epidemiology of these organisms. Investigators in New York recently found that 44% of children less than two years of age were colonized with these organisms on one or more occasion with a monthly prevalence rate of 11%. Children were usually colonized with only one predominant strain but could carry up to seven different strains at once. The acquisition of this organism was greatest among children less than one year of age.³

The major virulence factor of *H. influenzae* is the production of capsular polysaccharide. Encapsulated organisms (types a-f; predominately type b) have historically been the causative agents for more severe infections (e.g., bacteremia, meningitis) while the unencapsulated isolates (non-typeable) were frequently involved with local disease (e.g., otitis media, sinusitis). Although invasive infections with nontypeable strains have been known to occur in healthy children, those with facial or cranial bony defects, a history of chronic otitis media, or immunoglobulin dysfunction or deficiency were known to suffer more severe infections with this organism. Our patient however, demonstrated none of those risk factors.

The presentation of patients with non-typeable *H. influenzae* bacteremia or meningitis is not unlike that of other life threatening bacterial illnesses such as *Streptococcus pneumoniae* or *Neisseria meningitidis*. There are no clinical features that patients demonstrate when infected with these organisms which set it apart from the more commonly encountered bacterial pathogens, therefore, clinicians must rely on the clinical laboratory for the proper identification of the organism. Patients with life threatening forms of this bacterial infection should always be treated with systemic antimicrobial agents. When selecting antimicrobial agents, clinicians should be aware that similar to HIB, approximately 30% of non-typeable strains produce beta-lactamase and are ampicillin resistant.⁴ Cefuroxime, cefotaxime, ceftriaxone, and chloramphenicol are effective alternatives when patients are infected with beta-lactamase producing organisms. In patients with meningitis or overwhelming sepsis where meningitis is of concern, cefuroxime should not be used since previous studies demonstrated delayed cerebrospinal fluid sterilization in patients with HIB meningitis.⁵ Once susceptibility information becomes available, antimicrobial therapy can be altered accordingly.

Due to the limited data about the treatment of invasive disease due to the nontypeable strains, the duration of therapy has been based upon prior experience with HIB. Clinicians who trained after the decline of HIB disease should be reminded of the aggressiveness of the *Haemophilus* organism. Unlike pneumococcal or meningococcal bacteremia, patients with *H. influenzae* bacteremia (including type b and

non-typeable isolates) have been demonstrated to develop a secondary focus of infection in approximately 30% of cases treated with oral antimicrobial agents alone.⁶ In patients with bacteremia therefore, intravenous or intramuscular antimicrobial agents are usually used for 5-7 days before completing a 10 day course with oral medications, while patients with uncomplicated meningitis receive 7-10 days of systemic therapy. The majority of patients infected with this organism will require hospitalization and close daily inspection for the development of secondary sites of infection such as bones, joints, or the pericardium.

The lack of the ability to obtain *Haemophilus* typing information in many community laboratories means that treatment and prophylaxis decisions will be made based upon incomplete information. Dexamethasone therapy is recommended for patients with HIB meningitis to prevent neurologic sequela, but has never been studied for patients with non-typeable disease.⁷ In areas where typing is not available however, patients with meningitis due to *Haemophilus* should be approached as if they are infected with type b and receive dexamethasone (0.6 mg/kg/d four times daily for four days) and antimicrobial therapy. Likewise, rifampin prophylaxis (20 mg/kg/d once daily for four days) is indicated for family members of a patient with invasive disease due to type b strains if there are incompletely immunized children in the family under four years of age, but there are no recommendations for family prophylaxis when a patient is infected with non-typeable organisms.⁸ Without typing information, prophylaxis decisions should be made as if the patient was infected with HIB.

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Cardiology Commentary and Update

Tracy Dietz, M.D.*

J. David Talley, M.D.*

SECONDARY PREVENTION OF CORONARY ARTERY DISEASE

Atherosclerotic coronary artery disease is the leading cause of death of adults in the United States. It is responsible for more than one of every four deaths. Due to the decline in the death rate from acute myocardial infarction (MI), there has been an increase in the number of patients with chronic myocardial ischemia. Secondary prevention of coronary artery disease is directed at forestalling subsequent cardiac events in patients who have already experienced at least one acute ischemic event.

This review will focus on the recently published guidelines for secondary prevention from the American Heart Association (Table 1).¹

Cigarette Smoking. Cigarette smoking is a risk factor for the development of angina pectoris and MI and increases the risk for recurrent MI and death. Survivors of MI who continue to smoke have a recurrence rate of MI and death twice that of patients who stop smoking. This risk of a second cardiac event declines rapidly after smoking cessation. Within three years of stopping smoking, the risk of recurrent MI is approximately the same as ex-smokers and those who have never smoked.²

Systemic Arterial Hypertension. There have been no secondary prevention trials using behavioral or medical therapy for lowering the systemic arterial blood pressure after an initial cardiac event. However, based on information from primary prevention trials, the American Heart Association recommends a systolic blood pressure goal of less than 140 mmHg for secondary prevention.

Cardiac Rehabilitation. A meta-analysis of randomized clinical trials of cardiac rehabilitation after MI with exercise as a major component showed that total and cardiovascular mortality was reduced by approximately 25%.³ The American Heart Association recommends 30-40 minutes of moderate intensity exercise three to four times weekly.

Obesity. Although there are no randomized controlled

clinical trials of weight loss in obese subjects to study coronary artery disease endpoints, the American Heart Association recommends intensive diet and physical activity intervention in patients who weigh more than 120% of their ideal body weight.

Aspirin. Secondary prevention trials treating survivors of MI with aspirin have shown trends in reduction of cardiac events, but the trials were too small to show statistical significance. The Anti-Platelet Trialists Collaboration performed a meta-analysis of eleven trials including more than 18,000 patients who received anti-platelet therapy. Patients with prior MI had a 30% reduction in risk of recurrent, non-fatal MI; a 25% reduction in total cardiovascular events; and a 12% reduction in total mortality (Table 2).⁴

There is no benefit to adding dipyridamole or warfarin to aspirin alone.⁵ The American Heart Association recommends the daily use of aspirin given in a dose of 80-325 mg for all patients who have had a prior cardiovascular event. Warfarin given in a dose to achieve an International Normalized Ratio (INR) of 2.0-3.5 is recommended for patients unable to take aspirin.

Estrogen Replacement Therapy. There have been no randomized clinical trials of estrogen replacement therapy used as secondary prevention. Recently however, a meta-analysis which included more than 2200 postmenopausal females 55 years of age or older has been published. This study found that females with coronary stenosis more than 70% diameter who took estrogen had a 10 year survival of 97%, compared to 60% in females who had never used estrogen ($p=0.001$).⁶

Two other studies have suggested that estrogen use protected against coronary artery disease progression.^{7,8} Based on these trials, the American Heart Association recommends estrogen replacement therapy in all post menopausal females who have no contra-indication to its use. The adverse effects of estrogen therapy should be closely monitored.

Beta-Blockers. More than 35,000 patients have been

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Table 1: Guidelines for Comprehensive Risk Reduction in Patients with Atherosclerotic Coronary Artery Disease

Risk Intervention	Recommendations																						
Smoking: <u>Goal</u> - complete cessation	Strongly encourage patient and family to stop smoking. Provide counseling, nicotine replacement, and formal cessation programs as appropriate.																						
Lipid management: <u>Primary goal</u> LDL<100 mg/dL <u>Secondary goals</u> HDL>35 mg/dL; TG<200 mg/dL	<p>Start AHA Step II Diet in all patients: $\leq 30\%$ fat, $<7\%$ saturated fat, <200 mg/dL cholesterol.</p> <p>Assess fasting lipid profile. In post-MI patients, lipid profile may take 4 to 6 weeks to stabilize. Add drug therapy according to the following guide:</p> <table border="1"> <tr> <td>LDL<100 mg/dL</td> <td>LDL 100 to 130 mg/dL</td> <td>LDL>130 mg/dL</td> <td>HDL<35 mg/dL</td> </tr> <tr> <td>No drug therapy</td> <td>Consider adding drug therapy to diet as follows:</td> <td>Add drug therapy to diet, as follows:</td> <td rowspan="3">Emphasize weight management and physical activity. Advise smoking cessation. If needed to achieve LDL goals, consider niacin, statin, fibrate.</td> </tr> <tr> <td></td> <td align="center" colspan="2">↳ Suggested drug therapy ↳</td> </tr> <tr> <td></td> <td>TG<200 mg/dL</td> <td>TG 200 to 400 mg/dL</td> <td>TG>400 mg/dL</td> </tr> <tr> <td></td> <td>Statin Resin Niacin</td> <td>Statin Niacin</td> <td>consider combined drug therapy (niacin, fibrate, statin)</td> </tr> </table> <p>If LDL goal not achieved, consider combination therapy.</p>				LDL<100 mg/dL	LDL 100 to 130 mg/dL	LDL>130 mg/dL	HDL<35 mg/dL	No drug therapy	Consider adding drug therapy to diet as follows:	Add drug therapy to diet, as follows:	Emphasize weight management and physical activity. Advise smoking cessation. If needed to achieve LDL goals, consider niacin, statin, fibrate.		↳ Suggested drug therapy ↳			TG<200 mg/dL	TG 200 to 400 mg/dL	TG>400 mg/dL		Statin Resin Niacin	Statin Niacin	consider combined drug therapy (niacin, fibrate, statin)
LDL<100 mg/dL	LDL 100 to 130 mg/dL	LDL>130 mg/dL	HDL<35 mg/dL																				
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	TG<200 mg/dL	TG 200 to 400 mg/dL		TG>400 mg/dL																			
	Statin Resin Niacin	Statin Niacin	consider combined drug therapy (niacin, fibrate, statin)																				
Physical activity: <u>Minimum goal</u> 30 minutes 3 to 4 times per week	<p>Assess risk, preferably with exercise test, to guide prescription.</p> <p>Encourage minimum of 30 to 60 minutes of moderate-intensity activity 3 or 4 times weekly (walking, jogging, cycling, or other aerobic activity) supplemented by an increase in daily lifestyle activities (eg, walking breaks at work, using stairs, gardening, household work). Maximum benefit 5 to 6 hours a week.</p> <p>Advise medically supervised programs for moderate- to high-risk patients.</p>																						
Weight management:	<p>Start intensive diet and appropriate physical activity intervention, as outlined above, in patients $>120\%$ of ideal weight for height.</p> <p>Particularly emphasize need for weight loss in patients with hypertension, elevated triglycerides, or elevated glucose levels.</p>																						
Antiplatelet agents/ anticoagulants:	<p>Start aspirin 80 to 325 mg/d if not contraindicated.</p> <p>Manage warfarin to international normalized ratio=2 to 3.5 for post-MI patients not able to take aspirin.</p>																						
ACE inhibitors post-MI	<p>Start early post-MI in stable high-risk patients (anterior MI, previous MI, Killip class II [S, gallop, rates, radiographic CHF]).</p> <p>Continue indefinitely for all with LV dysfunction (ejection fraction≤ 40) or symptoms of failure.</p> <p>Use as needed to manage blood pressure or symptoms in all other patients.</p>																						
Beta-blockers:	<p>Start in high-risk post-MI patients (arrhythmia, LV dysfunction, inducible ischemia) at 5 to 28 days. Continue 6 months minimum. Observe usual contraindications.</p> <p>Use as needed to manage angina rhythm or blood pressure in all other patients.</p>																						
Estrogens:	<p>Consider estrogen replacement in all postmenopausal women.</p> <p>Individualize recommendation consistent with other health risks.</p>																						
Blood pressure control: <u>Goal</u> $\leq 140/90$ mm Hg	<p>Initiate lifestyle modification - weight control, physical activity, alcohol moderation, and moderate sodium restriction - in all patients with blood pressure>140 mm Hg systolic or 90 mm Hg diastolic.</p> <p>Add blood pressure medication, individualized to other patient requirements and characteristics (ie, age, race, need for drugs with specific benefits) if blood pressure is not less than 140 mm Hg systolic or 90 mm Hg diastolic in 3 months or if initial blood pressure is >160 mm Hg systolic or 100 mm Hg diastolic.</p>																						

ACE indicates angiotensin-converting enzyme; MI, myocardial infarction; TG, triglycerides; and LV, left ventricular.

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involved in long-term, placebo-controlled secondary prevention trials using beta-blockers. In patients with a prior cardiac event, beta-blocking agents reduce the risk of recurrent MI by 27%, total mortality by 22%, and sudden death by 32%.⁹ The American Heart Association recommends giving beta-blockers to all high risk post MI patients (those with arrhythmia, left ventricular dysfunction, inducible myocardial ischemia) who have no contraindications, at 5-28 days and continuing therapy for at least 6 months.

ACE-inhibitors. A number of trials have studied the use of angiotensin converting enzyme inhibitors (ACE)-inhibitors in patients post MI. The Survival and Ventricular Enlargement (SAVE) trial randomized 2231 patients 3-16 days after sustaining a MI with an ejection fraction less than 40% without symptoms of congestive heart failure to placebo or captopril and followed them for 42 months. With the use of captopril, there was a 19% reduction in total mortality, a 21% reduction in cardiovascular death, a 37% decrease in the development of severe heart failure, a 22% reduction in the need for repeat hospitalization for congestive heart failure, and a 25% decrease in recurrent MI.¹⁰ Based on this and other trials, the American Heart Association recommends beginning an ACE-inhibitor early in the post MI course in stable high-risk patients (anterior MI, prior MI, or Killip class II-IV).

Lipid lowering therapy. The American Heart Association advocates aggressive lipid lowering therapy in patients with known atherosclerotic coronary artery disease. Studies have shown that dietary intervention alone and in combination with pharmacological therapy reduces the risk of total and cardiovascular mortality and other coronary events. Studies have also demonstrated arrest of progression and regression of angiographically defined coronary lesions. The American Heart Association recommends a Step II diet in patients with known atherosclerotic coronary artery disease: a diet of less than 30% fat of which less than 7% is saturated fat and less than 200 mg/day of total cholesterol. All patients should have a fasting lipid profile (total cholesterol, low and high density lipoprotein subfractions, and triglycerides). Pharmacological therapy should be added as necessary to achieve a low density lipoprotein less than 100 mg/dl, a high density lipoprotein greater than 35 mg/dl, and a triglyceride level less than 200 mg/dL.

Conclusions

There is dramatic benefit of prescribing behavioral and pharmacological therapy aimed at preventing recurrent cardiovascular events in patients with known coronary artery disease. With the high prevalence of atherosclerotic coronary artery disease and the increased number of patients with chronic myocardial

ischemia, it is critically important that physicians be aware of and appropriately utilize strategies to prevent recurrent events in their cardiac patients.

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Table 2: Benefits of Secondary Intervention in Patients with a Prior Cardiac Event

	<u>Aspirin</u> ↓12%	<u>Beta-blockers</u> ↓22%	<u>ACE-inhibitors</u> ↓19%
Total mortality			
Cardiovascular death	-	-	↓21%
Recurrent myocardial infarction	↓30%	↓27%	↓25%
Severe congestive heart failure	-	-	↓37%

Abbreviation: ACE = angiotensin converting enzyme

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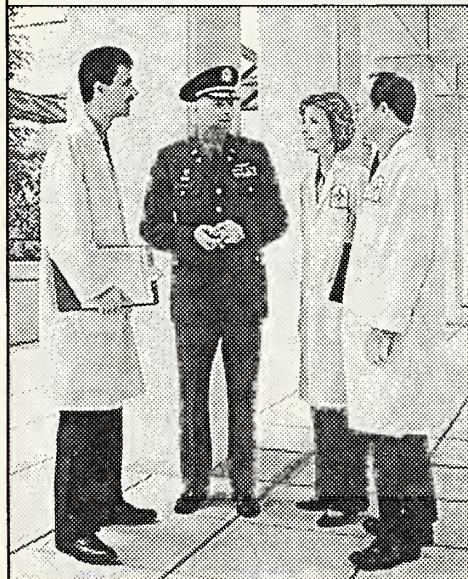
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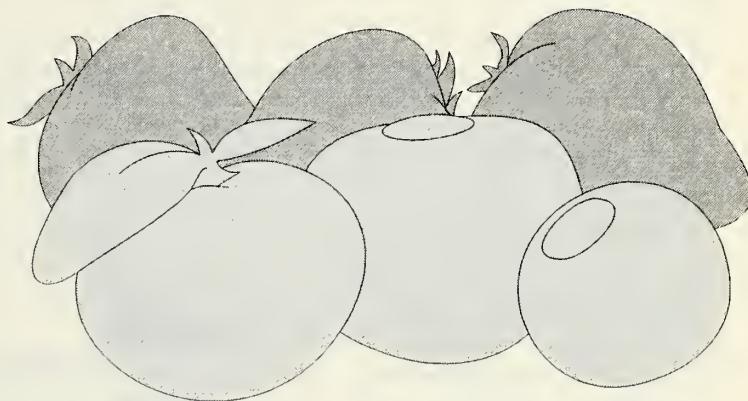
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Cyclospora Infections on the Increase



Cyclospora cayetanensis is a recently characterized coccidian parasite that has been associated with the consumption of raspberries, strawberries and other fresh fruits. The first known cases in humans were diagnosed in 1977 and prior to 1996 only three outbreaks of Cyclospora infection had been reported. In May and June of 1996, however, at least 10 states reported clusters or sporadic cases of the infection (there have been no confirmed cases in Arkansas to date). In one recent outbreak, 37 of 64 persons developed Cyclospora infections after eating berries at a luncheon.

Cyclospora infects the small intestine and typically causes watery diarrhea with frequent stools. Other symptoms include loss of appetite, weight loss, stomach cramps, nausea, vomiting, tiredness and low grade fever. The incubation period is approximately one week. If not treated, illness may last for a few days to a month or longer.

Fecal oral transmission is possible but unlikely because excreted oocysts require days to weeks to sporulate and become infectious. The parasite may be transmitted by swallowing oocyst found in contaminated food or water. It is unknown whether animals can serve as a source of infection for humans.

Oocysts can be identified in stools by examination

of wet mounts under phase microscopy, by use of an acid-fast stain (oocysts are variably acid-fast) or the demonstration of autofluorescence with ultraviolet epifluorescence microscopy. Since a single negative stool does not rule out the disease, three or more specimens may be required. Stool samples may be submitted to the Arkansas Department of Health in containers supplied by county health units (specifically request Cyclospora examination). There is no test for the parasite on fruits and berries, so thorough washing of fruits and berries should always be practiced prior to consumption.

Cyclospora infections can be treated with a seven-day course of oral trimethoprim (TMP)-sulfamethoxazole (SMX) (for adults, TMP 160mg plus SMX 800mg twice daily; for children, TMP 5mg/kg plus SMX 25 mg/kg twice daily).

To report suspected cases or if you have any questions concerning Cyclospora, please call the Arkansas Department of Health, Division of Epidemiology at (501) 661-2893 during normal business hours.

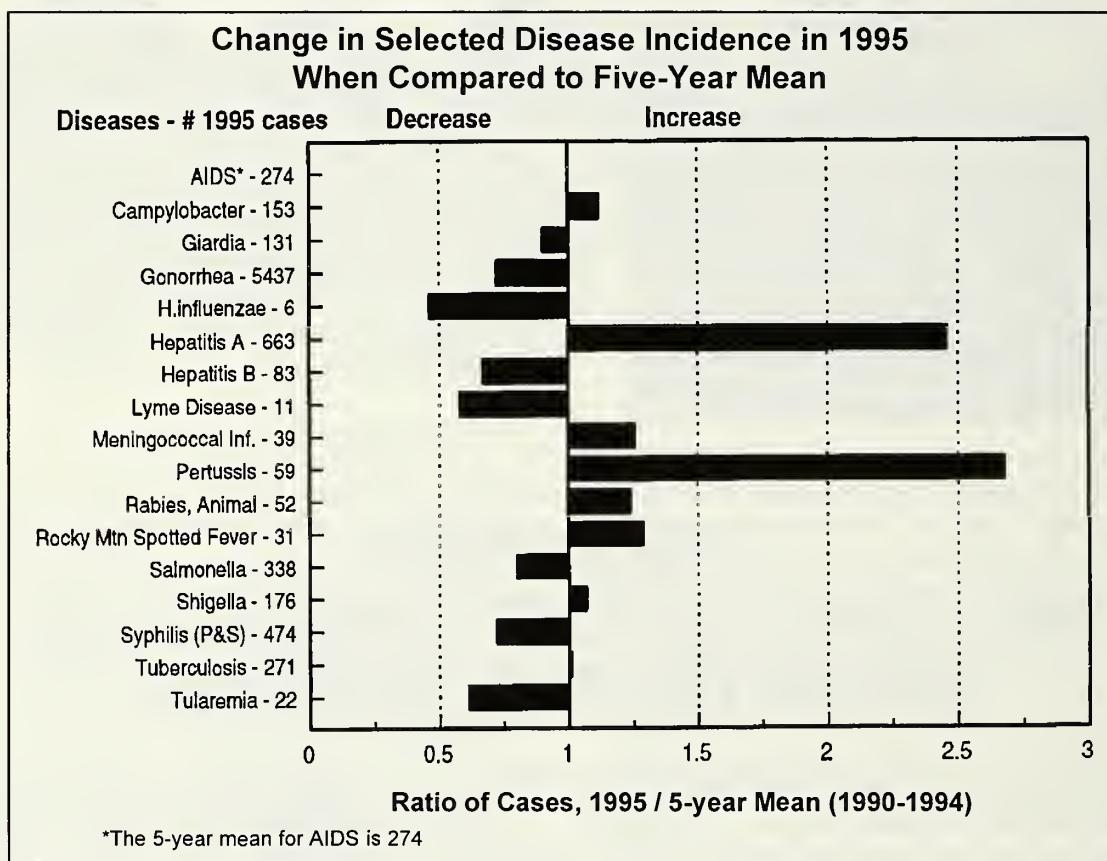
Footnote: Portions of the above article were adapted from "Outbreaks of *Cyclospora cayetanensis* Infection - United States, 1996"; MMWR, Volume 45, Number 25.

Reportable Disease Update, Arkansas, 1995

The Division of Epidemiology, Arkansas Department of Health (ADH) compiles data on the statewide occurrence of notifiable diseases in Arkansas. Data in this summary are derived from reports received by the ADH from physicians, practitioners, nurses, medical care facility directors and laboratory personnel who report cases of notifiable conditions listed in the "Rules and Regulations Pertaining to Communicable Disease Control" adopted by the Arkansas State Board of Health in 1977 pursuant to the authority conferred by Act 96 of 1913 (Arkansas statutes, 1947, Section 82-110) Section III.

The figure below shows the change (increase or decrease) in the number of reported cases received in 1995 for selected diseases when compared to the average number of cases reported during the previous five years (5-year mean). The data are shown as a ratio of the number of cases reported in 1995 to the 5-year mean.

To obtain additional information on these and other reportable diseases and conditions or to obtain a listing and instructions on reporting communicable diseases to the ADH, please call (501) 661-2893 or 1-800-486-5400, ext. 2893 during normal business hours.



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Reported Cases of Selected Reportable Diseases in Arkansas

Profile for May 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases May 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	20	67	56	48	153	187
Giardiasis	7	46	44	35	131	126
Shigellosis	9	34	51	65	176	193
Salmonellosis	37	109	78	82	332	534
Hepatitis A	40	236	118	39	663	253
Hepatitis B	6	37	24	21	83	60
HIB	0	0	4	2	6	5
Meningococcal Infections	5	23	23	31	39	55
Viral Meningitis	0	11	7	18	31	62
Lyme Disease	4	9	4	8	11	15
Rocky Mountain Spotted Fever	0	2	6	4	31	18
Tularemia	2	5	9	10	22	23
Measles	0	0	2	1	2	5
Mumps	0	0	4	4	5	7
Rubella	0	0	0	0	0	0
Gonorrhea	396	2081	2047	2949	5437	7078
Syphilis	69	392	422	456	1017	1096
Legionellosis	0	0	5	5	5	16
Pertussis	0	3	14	19	59	33
Tuberculosis	28	90	89	83	271	264



Arkansas HIV/AIDS Report

1983-1996

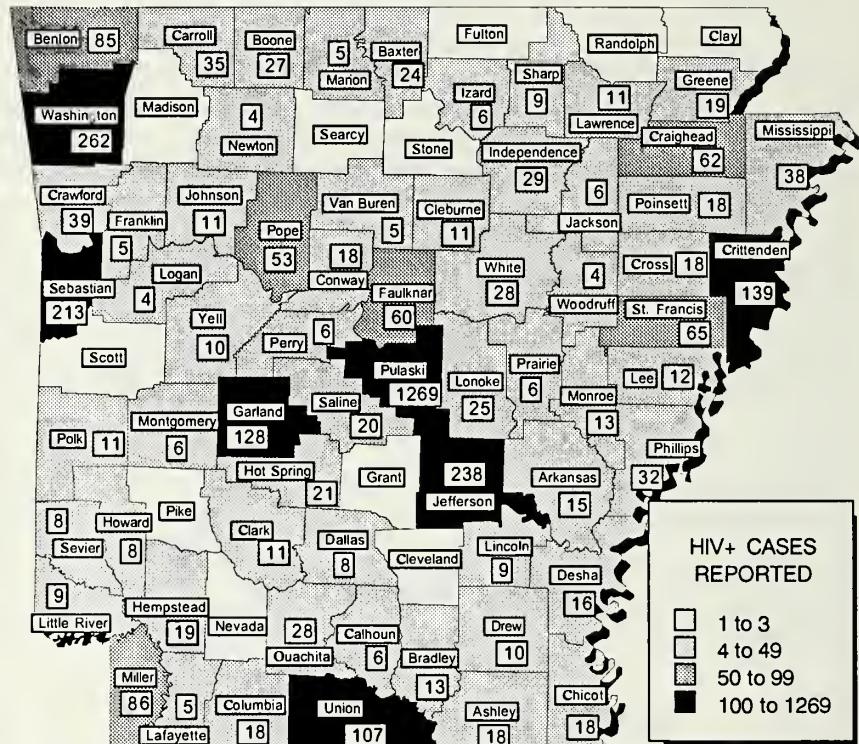
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



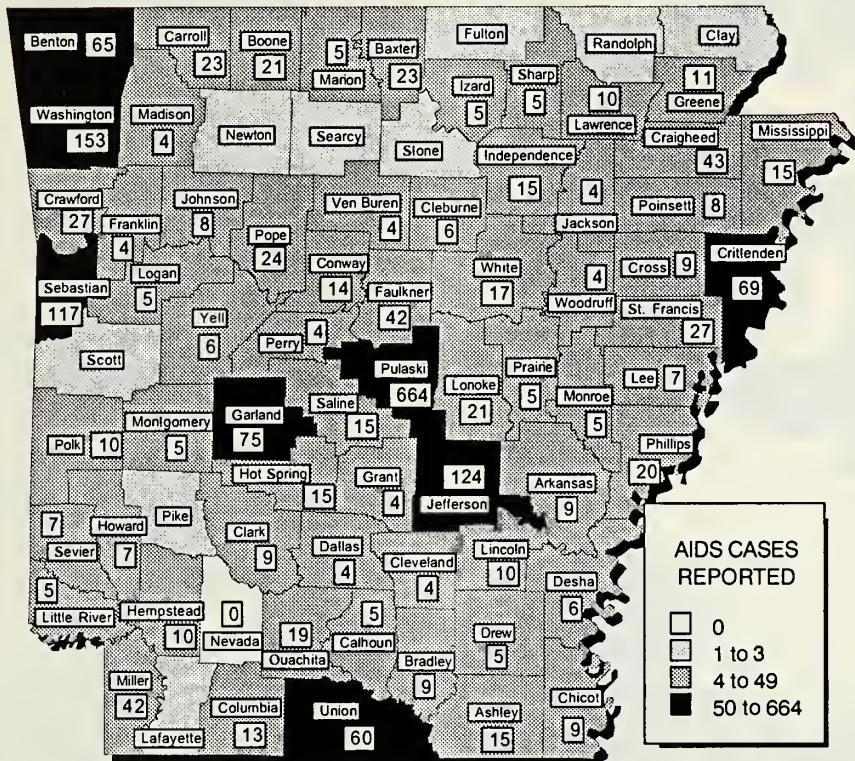
County of residence at the time of test for the 3,603 Arkansans reported to be HIV+. (6/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	100	215	248	414	400	392	352	367	338	151	2,977	83
	Female	8	26	37	68	85	81	94	90	91	46	626	17
A G E	Under 5	1	1	2	8	13	6	3	7	2	1	44	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	17	135	4
	20-24	12	40	52	71	44	49	64	60	47	17	456	13
	25-29	21	70	71	112	105	107	111	85	78	39	799	22
	30-34	25	50	64	116	120	111	91	102	101	35	815	23
	35-39	19	36	40	81	88	68	77	69	81	39	598	17
	40-44	16	17	17	43	50	41	47	50	46	21	348	10
	45-49	6	8	18	13	20	26	18	27	24	10	170	5
	50-54	2	1	5	8	14	14	10	12	17	7	90	3
	55-59	1	3	4	6	3	13	6	7	5	6	54	2
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	4	37	1
R A C E	White	87	170	174	328	298	293	278	259	260	96	2,243	62
	Black	21	69	108	152	184	173	163	184	159	89	1,302	36
	Hispanic	0	1	3	1	3	4	1	7	3	2	25	1
	Other/Unknown	0	1	0	1	0	3	4	7	7	10	33	1
R I S K	Male/Male Sex	64	137	141	243	246	261	242	229	157	53	1,773	49
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	50	9	531	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	25	8	244	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	94	56	19	516	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	34	42	23	11	7	28	134	108	408	11
HIV CASES BY YEAR		108	241	285	482	485	473	446	457	429	197	3,603	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,603 Arkansans reported to be HIV+, 2,033 have been diagnosed with AIDS. (6/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

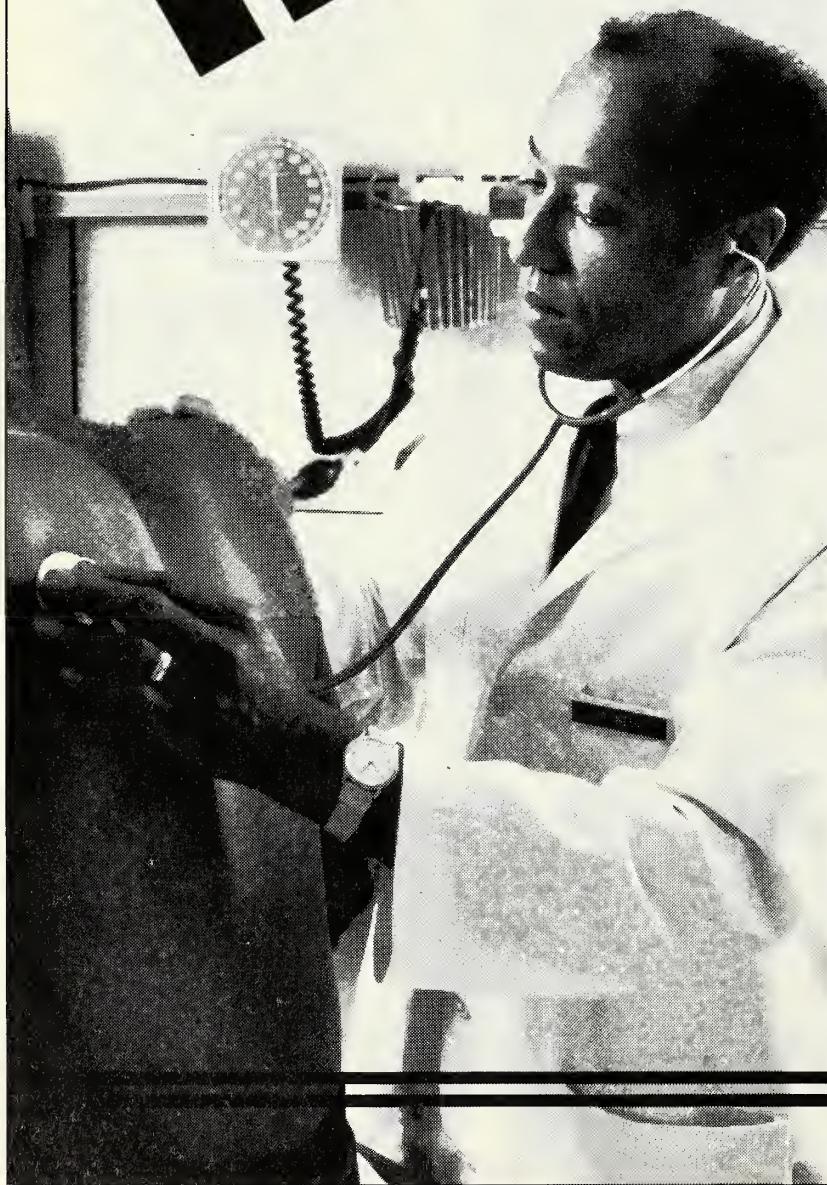
Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	111	1,764	87
	Female	5	6	10	20	25	35	64	42	36	26	269	13
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	1	7	0
	13-19	0	0	0	4	3	2	4	3	1	2	19	1
	20-24	7	5	11	11	14	14	31	22	11	8	134	7
	25-29	24	22	13	44	43	67	78	45	47	18	401	20
	30-34	20	21	21	47	42	73	98	81	75	37	515	25
	35-39	19	15	20	31	38	55	80	52	49	30	389	19
	40-44	10	7	4	21	35	28	49	39	35	21	249	12
	45-49	5	3	3	14	6	24	28	22	17	8	130	6
	50-54	1	1	2	5	6	7	10	12	15	3	62	3
	55-59	2	2	4	1	4	8	8	5	6	5	45	2
	60-64	1	1	1	1	1	2	6	10	5	1	29	1
	65 and older	1	4	0	4	2	2	3	3	9	3	31	2
R A C E	White	74	61	58	141	134	206	273	190	174	75	1,386	68
	Black	16	20	21	47	66	75	121	102	97	60	625	31
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	166	134	56	1,182	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	47	9	291	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	9	163	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	34	13	202	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	2	36	2
	Undetermined	0	2	1	3	1	2	2	8	26	47	92	5
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	137	2,033	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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New Members

ARKADELPHIA

Rucker, Gari Mills, Pediatrics. Medical Education, UAMS, 1993. Internship/Residency, Earl K. Long Medical Center, Baton Rouge, LA, 1994/1996. Board eligible.

BATESVILLE

Beck, James Foster, Hematology/Oncology. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1993.

BENTON

Hughes, Alan Wayne, Ophthalmology. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1995.

CROSSETT

Henry, William Warren, Jr., Family Practice. Medical Education, UAMS, 1993. Internship/Residency, UAMS, AHEC-Pine Bluff, 1994/1996. Board pending.

DARDANELLE

Hartman, Ray, General Surgery. Medical Education, Dalhousie, Halifax, Nova Scotia, 1984. Internship, Dalhousie, 1985.

DE QUEEN

Jones, Thomas E.B., Family Practice. Medical Education, University of Alberta, Calgary Alberta Canada, 1975. Residency, Memorial Hospital of Long Beach, Calif., 1977.

FAYETTEVILLE

Ball, Charles S. Pediatrics. Medical Education, UAMS, 1986. Internship, Arkansas Children's Hospital, 1989. Board certified.

FT. SMITH

Benson, Eric H., Radiology. Medical Education, University of Texas Southwestern Medical Center, Dallas, 1991. Residency, University of Texas Southwestern Medical Center, 1995. Board certified.

Ghan, Sheryl Evone, Pediatrics. Medical Education, Oklahoma State University - College of Osteopathic Medicine, Tulsa, 1993. Internship/Residency, Tulsa Regional Medical Center, 1994/1996.

Lansford, Bryan Keith, Otolaryngology. Medical Education, University of Oklahoma, Oklahoma City, 1990. Internship/Residency, 1992/1996.

Woodson, Alexa, Family Practice. Medical Education, University of Oklahoma, Oklahoma City, 1992. Internship/Residency, AHEC-Fort Smith, 1993/1995. Board certified.

HOT SPRINGS

Herrold, Jeffrey William, Plastic Surgery. Medical Education, UAMS, 1984. Internship/Residency, Fitzsimons Army Medical Center, Aurora, CO, 1985/1994. Board certified.

JONESBORO

Chan, Kenneth, Neurology. Medical Education, Southeastern University Health Sciences, North Miami Beach, FL, 1992. Internship, Dallas/Ft. Worth Medical Center, 1993. Residency, Loma Linda University Medical Center, 1996.

Collins, Kevin Basil, Radiation Oncology. Medical Education, University of Oklahoma, Oklahoma City, 1992. Internship, University of Oklahoma, 1993. Residency, New York University, 1996. Board eligible.

Tagupa, Eumar T., Cardiology. Medical Education, Indiana University School of Medicine, Indianapolis, IN, 1989. Internship/Residency, Medical University of South Carolina, Charleston, 1990, 1993. Board certified.

LITTLE ROCK

Bauer, David Harris, Plastic Surgery. Medical Education, Vanderbilt University Medical School, Nashville, TN, 1989. Internship/Residency, UAMS, 1990/1994, and Vanderbilt University Medical Center, Nashville, TN, 1996. Board certified.

Calicott, Timothy, Emergency Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996.

Flanigin, Richard C., Psychiatry. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1996.

Keplinger, Florian S., Physical Medicine & Rehabilitation. Medical Education, University of Santo Tomas, Manila, Philippines. Internship/Residency, Univ. of Santo Tomas & UAMS, 1993/1996. Board eligible.

Meadors, John N., Radiology. Medical Education, UAMS, 1988. Residencies, University of Tennessee Medical Center at Knoxville, 1991 and 1995. Fellowship, University of Texas Medical Branch Hospitals, Galveston, 1996. Board certified.

Paslidis, Nick John, Internal Medicine. Medical Education, University of Crete, Greece/Ross University, 1991/1988. Internship/Residency, University of Texas Medical School, Houston, 1993/1995. Fellowship, Harvard Medical School, 1996. Board eligible.

Payne, Cheryl L., Radiation Oncology. Medical Education, UAMS, 1991. Internship, UAMS, 1992. Residency, Medical College of Virginia, 1996. Board certified.

Van Noy, Joanna W., Pathology. Medical Education, University of Mississippi Medical Center, Jackson, 1991. Internship, Parkland Hospital, Dallas, TX, 1992. Residency, University of Mississippi Medical Center/UAMS, 1996.

MENA

Beckel, Ron W., Pediatrics. Medical Education, UAMS, 1993. Internship/Residency, Arkansas Children's Hospital, 1994/1996.

MONETTE

Veser, Michael Watson, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC-NE, Jonesboro, 1994/1996. Board eligible.

NORTH LITTLE ROCK

Russell, Anthony E., Neurosurgery. Medical Education, UAMS, 1989. Internship/Residency, 1990/1995. Board certified.

Valley, Marc A., Anesthesiology-Pain. Medical Education, Loma Linda University School of Medicine, Loma Linda, Calif., 1984. Internship, White Memorial, Los Angeles, 1985. Residency, Wilfuro Hall USAF Medical Center, San Antonio, 1990. Fellowship, Johns Hopkins, Baltimore, 1992. Board Certified.

ROGERS

Cooper, Scott S., Orthopedic Surgery. Medical Education, UAMS, 1991. Internship, University of Tennessee, 1992. Residency, University of Tennessee/Campbell Clinic - Memphis, 1996. Board eligible.

RUSSELLVILLE

Miller, Mark E., Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC-NW, 1994/1996. Board pending.

SPRINGDALE

Cannon, Robert David, Anesthesiology/Pain Management. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1994. Fellowship, University of South Carolina, 1995.

Levernier, James Edwin, Pediatric-Development/Behavior. Medical Education, University of Minnesota, Minneapolis, MN, 1968. Internship/Residency, Harbor General Hospital, UCLA, Torrance, Calif., 1969/1973. Board certified.

OUT OF STATE

Smith, Christopher Todd, Family Medicine. Medical Education, UAMS, 1993. Internship/Residency, AHEC-Southwest, 1994/1996. Board eligible.

RESIDENTS

Alley, Jerri Lynn, Dermatology. Medical Education, University of Kentucky, Lexington. Internship/Residency, UAMS.

Cash, Paige Partridge, Obstetrics/Gynecology. Medical Education, UAMS, 1996. Internship/Residency, UAMS.

Danner, Christopher James, Otolaryngology. Medical Education, University of Alabama at Birmingham, 1996. Internship/Residency, UAMS.

Gutierrez, Miguel Angel, Internal Medicine/Neurology. Medical Education, Universidad Nacional Autonoma de Mexico, 1979. Internship/Residency, UAMS.

Hardin, Christopher Scott. Medical Education, UAMS, 1996.

Hatley, Russell Eric, Family Medicine. Medical Education, UAMS, 1996. Internship, UAMS.

Jussa, Murad M., Internal Medicine. Medical Education, Dow Medical College, 1989. Fellowship, UAMS.

Kidd, Joseph Neil, General Surgery. Medical Education, Baylor College of Medicine, Houston, TX 1996. Residency, UAMS.

Markham, Larry Wayne, Internal Medicine/Pediatrics. Medical Education, East Tennessee State University James H. Quillen College of Medicine, Johnson City, 1996. Internship, UAMS.

Moix, Frank Martin, Jr., Internal Medicine. Medical Education, UAMS, 1996. Internship, UAMS.

Richey, Jason Dean, Family Medicine. Medical Education, UAMS, 1996. Internship, AHEC-Jonesboro.

Roach, Milton Carey, III, Medicine/Pediatrics. Medical Education, Texas Tech University School of Medicine, Lubbock/Amarillo, TX, 1996. Residency, UAMS.

Runion, Lance Keith, Diagnostic Radiology. Medical Education, UAMS, 1996. Residency, UAMS.

Smith, Daniel Fuller. Medical Education, UAMS, 1996. Internship, UAMS.

Smith, Matthew W. Medical Education, UAMS, 1996.

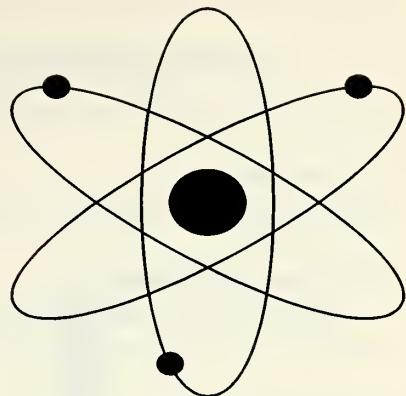
Sutterfield, Vikki Leigh, Family Practice. Medical Education, UAMS, 1996. Residency, AHEC-Fort Smith.

Wagner, Barbara R., Internal Medicine. Medical Education, UAMS. 1996. Internship/Residency, UAMS.

STUDENTS

Jasen C. Chi	Wilson H. Howe
Twyla Rose Norsworthy	Jason Ray Skinner
Randy Dean Walker	Ramona L. Rhodes
Barbara G. Woods	Jason Eli Farrar
Angela Swain Krepps	Brett Thomas Krepps
Jamie Dyan Daniel	Ronald David Hardin, Jr.
Mark Edward Moss	Timothy Scott Harton
Paul Richard Gardial	Michelle Leigh Rodgers
Mark Bradley Baker	Tracy Leigh Crews
Margaret Anne West	Martin Alan Hannon

Radiological Case of the Month



Steven R. Nokes, M.D.
Eleanor E. Kennedy, M.D.
W. Bradley Pierce, M.D.

History:

This 17-year-old female presented with exertional syncope. She had a positive head-up tilt, but also an abnormal echo-doppler suggestive of right ventricular outflow tract dilatation. Electrophysiology revealed three beats of ventricular tachycardia with a left bundle branch block configuration. An MR scan of the heart was performed.



Figure 1

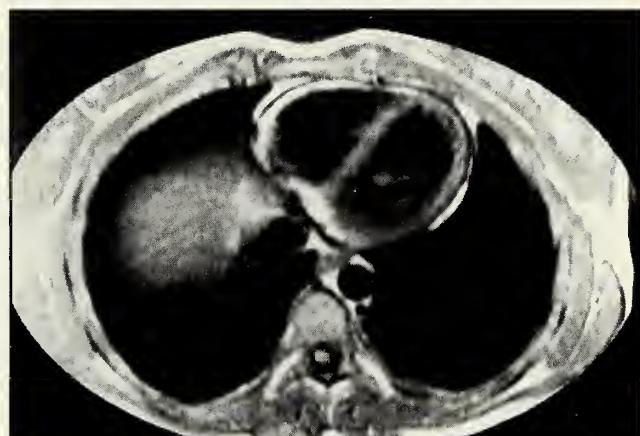


Figure 2

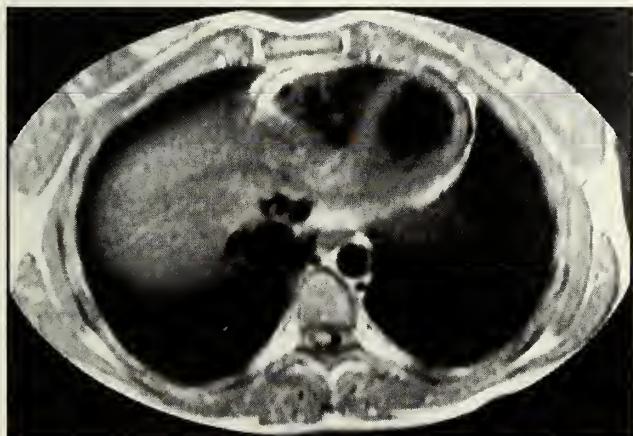


Figure 3

Figures 1, 2, and 3 are axial gated T1 weighted images of the heart.

Arrhythmogenic right ventricular dysplasia

Diagnosis:

Arrhythmogenic right ventricular dysplasia.

Radiographic Findings:

The MR examination reveals transmural fatty infiltration of the free wall and apex of the right ventricular myocardium with mild ventricular dilatation. The left ventricle is normal.

Discussion:

Arrhythmogenic right ventricular dysplasia is a rare cardiac disorder, first described in 1982 by Marcus, characterized by fatty and fibrous replacement of the normal myocardium of the right ventricle. This produces arrhythmia of right ventricular origin with subsequent syncope, cardiac pump failure and sudden death. The diagnosis is based on the presence of a ventricular arrhythmia with a left bundle branch block configuration and morphologic changes or motion abnormalities of the free wall of the right ventricle. The right ventricle is usually enlarged.

The gold standard for diagnosis has been angiography combined with biopsy. No quantitative criteria are available for echocardiography, although the diagnosis can be suggested, as in our case. Cardiac radionuclide angiography yields precise and reproducible right ventricular ejection fractions, but the right wall cannot be evaluated directly. Ultrafast CT can be used to make the diagnosis, but is not widely available and requires IV contrast. MR directly demonstrates fatty or fibrous changes in the right ventricle, allows multiplanar direct acquisitions, does not require contrast and reveals global and focal wall motion abnormalities using cine techniques.

References:

1. Auffermann W, Wichter T, Breithardte, et al. Arrhythmogenic right ventricular disease: MR imaging vs angiography. AJR 1993; 161:549-555.
 2. Daubert C, Descaves C, Foulgoc JL, et al. Critical analysis of cineangiographic criteria for diagnosis of arrhythmogenic right ventricular dysplasia. Am Heart J 1988; 115:448-459.
 3. Hamada S, Takamiya M, Ohe T, Eda H. Arrhythmogenic right ventricular dysplasia evaluation with electron-beam CT. Radiology 1993; 187:723-727.
-

Authors:

Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

Contributor: Eleanor E. Kennedy, M.D. is associated with Arkansas Heart Group in Little Rock.

Contributor: W. Bradley Pierce, M.D. is associated with Radiology Consultants in Little Rock.

In Memoriam

William Wood Abbott, M.D.

Dr. William Wood Abbott, of Little Rock, died Thursday, June 13, 1996. He was 75. He is survived by his wife, Helen Wilson Abbott of Little Rock, and was preceded in death by his first wife, Margaret Frame Abbott, who died in 1971. He is also survived by two daughters, Jane Abbot Bolding of De Land, Florida, and Mary Ann Davidson of Little Rock; one son, William Wood Abbott, Jr., of Long Beach, Mississippi; and five grandchildren.

James D. Armstrong, M.D.

Dr. James D. Armstrong, of Ashdown, died Saturday, July 20, 1996. He was 60. He is survived by his wife, Judy; three daughters and two sons-in-law, Bonnie Armstrong and Andrew Lashus of Charleston, S.C., Jimmie Anne Armstrong and Blane Graves of Little Rock and Mary Armstrong of Atlanta, Ga.; and two grandchildren, Connor and Laura Lashus.

Robert S. Bryles, M.D.

Dr. Robert S. Bryles, of Little Rock, died Wednesday, June 26, 1996. He was 57. Survivors include his wife, Patricia; four children, Kirsten B. Alexander of Maumelle, Robert M. Bryles of Atlanta, Ga., Mark B. Bryles of Fayetteville and Cecelia R. Bryles of Little Rock; one grandchild; one sister; one brother and five nieces and nephews.

George H. Collier Jr., M.D.

Dr. George H. Collier Jr., of Paragould, died Sunday, July 7, 1996. He was 51. He is survived by his wife, Sheila; one son, George E. Collier of Paragould; three daughters, Emily Kueter and Leanne Felty, both of Paragould, and Molly Collier of Little Rock; mother and stepfather, Mary Collier Buck and Joseph Wayne Buck of Paragould; one brother, one sister and three grandchildren.



SPECIAL NOTICE:

The AMS' P.O. Box Number Has Changed...

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In Fond Memory of AMS Immediate Past President James Armstrong, M.D.

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A good, loyal friend... You will be greatly missed.*

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remember our first and
foremost responsibility
is to our patients.
Regardless of practice
arrangements, govern-
ment regulations, or
other outside influences,
our primary duty is to
provide compassionate
and quality health care
to those who seek our
help.*

Excerpt from Dr. Armstrong's
1996 AMS Annual Session Speech
on May 4, 1996.

James Armstrong, M.D., 1995/1996 President of the Arkansas Medical Society, died Saturday, July 20, 1996. He was 60. Graveside services were held at 10 a.m., Monday, July 22, 1996, in Ashdown. Dr. Armstrong was a member of the Arkansas Medical Society for 34 years and had earned the respect and affection of the members of the Society and staff. Dr. Armstrong was serving on the Executive Committee at the time of his death. He served on the Council from 1982 until he was elected president-elect in 1994.

Dr. Armstrong was the director of and a family physician at Ashdown Clinic since 1965 and the Little River County Coroner since 1968. In addition, he was the Little River County Health Officer and had served in many positions including chief of staff at Little River Memorial Hospital.

Dr. Armstrong earned a bachelor's degree with honors in chemistry from Hendrix College in 1957, and in 1961 graduated from the University of Arkansas School of Medicine. He completed a rotating internship at the Hillcrest Medical Center in Tulsa, Oklahoma in 1962 and then went on to complete post-graduate studies at Peter Brent Brigham in Boston, Massachusetts; Parkland Hospital in Dallas, Texas; the University of Kansas in Kansas City; and the University of Arkansas in Little Rock.

In 1964, Dr. Armstrong earned his original certificate from the American Board of Family Practice. He was a charter member of the American Academy of Family Practice and the Arkansas Academy of Family Practice, where he also was a past director.

He served on the Arkansas Foundation for Medical Care's Board of Directors from 1980 to 1994 and as chairman of the board from 1991 to 1994. He served as an Arkansas delegate to the American Medical Peer Review Association and the Tri-Regional Review Conference.

He was a member of the Board of Directors of the Bank of Ashdown and a member of the First United Methodist Church of Ashdown. Survivors include his wife, Judy; three daughters; two sons-in-law, and two grandchildren. In lieu of flowers, the family asks that memorials be made to the Salvation Army or to a charity of your choice.

Things To Come

September 6 - 7

3rd Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington Univ. School of Medicine. For more information, call 1-800-325-9862.

October 5 - 6

Lymphomas and Leukemia: Clinical Advances, Basic Science and Supportive Care Issues. J. Bennett Johnston Building, Tulane University Medical Center, New Orleans, LA. Sponsored by Tulane University Medical Center, Tulane Cancer Center, Center for Continuing Education and Nursing Resource Center. For more information, call (504) 588-5466 or 1-800-588-5300.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

October 17 - 19

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

November 1 - 3

New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 14 - 17

15th Annual Scientific Meeting - Pain and Disease: Causes, Consequences, and Solutions. Sheraton Washington Hotel, Washington, DC. Sponsored by the American Pain Society. For more information, call (847) 375-4715.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

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Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07

Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
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OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
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Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
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Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
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Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
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VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom

Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center

Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club

Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Cardiology Conference, dates vary, 7:00 p.m., locations vary

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center

Gynecologic Malignancies, 3rd Thursday every other month, 7:00 a.m., various area hospitals

Neuro-Radiology Conference, 1st & 3rd Thursday, 12:00 noon, Wadley Regional Medical Center

Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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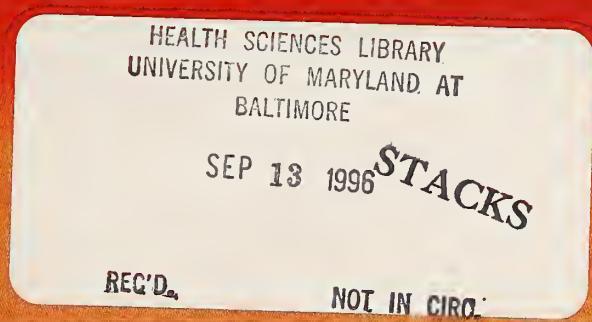
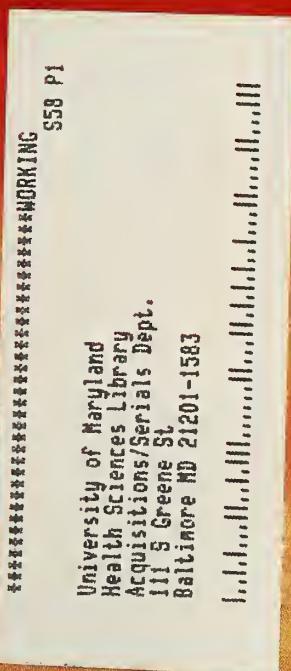
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Volume 93 Number 4

September 1996



Breastfeeding in Arkansas

*the role of the
health department
and a physician's
self assessment quiz*

- see articles on
pages 181 & 185

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Cover photograph taken by A.C. Haralson of the Arkansas Department of Parks & Tourism.

The Building of the Land of Opportunity

Ben N. Saltzman, M.D.*

Note: Dr. Saltzman came to Mountain Home, Arkansas, after acquiring a BA and an MA in Psychology and an M.D. in Medicine, all at the University of Oregon; a General Internship & Residency at Gorgas Hospital in Ancon, the Canal Zone; and four years of active duty in the Army of the United States detached to the Panama Canal Department of Health to care for the health of the Civilian population of Gamboa in the Canal Zone Dredging Division Area. An editorial detailing this period of Dr. Saltzman's life appeared in the March 1996 issue of The Journal.

When considering moving to Mountain Home, I was informed that the town had served as the base for the construction of a large hydroelectric dam named the Norfork Dam and that people, usually from the Chicago area, were moving into the region to fish and hunt. I was also informed that plans were afoot to build another dam in the Bull Shoals area which would also help the growth of the region, and I would have the opportunity of growing with the area. Somewhere, I had read that Arkansas was known as the *Land of Opportunity*.

Dr. Elisha Gray of Mountain Home had contacted Dr. Rector Hooper in Batesville seeking a physician to take his place in Mountain Home because of his persistent poor health and the fact that he had reached the age of 65 and could no longer function as before. Hooper, who just happened to be married to my wife's sister and also served as my mentor while at Gorgas Hospital was probably influenced by his wife who missed her sister. At any rate, I accepted the position and came to the land of opportunity to enter a rural practice.

I had been promised many things which were not forthcoming, such as a clinic to practice, a new car for transportation and a place to live. The house calls and deliveries in the rural cabins were overwhelming, and there was no hospital to carry on a semblance of modern practice.

Following a period of frustration, my resentment was palliated by the goodness of the people whom I served. I was rapidly invited into several organizations and made to feel completely at home, particularly when I made house calls. In general, there was considerable poverty. The only paved road into the town was a

Federal highway. The only paved street in the town was around the square because a new Courthouse had just been completed in the center. My office calls were two dollars. Some people thought this was much too high since some of their previous doctors charged only 75 cents. My collections averaged out about 50 percent. My house calls and deliveries often took me into areas that were death to my car's butyl rubber tires of the period. The manager of the service station that I frequented thought it was funny that I would ruin a couple of tires, not get paid a cent and then go out again to receive the same type of treatment.

I served on the city council for a period of seven years. The AMA recommended that doctors get involved in the activities of the citizens and prove that doctors are human. The idea was a good one but it sometimes backfired. As a physician, I was asked to contact owners of property that the city needed for the expansion of a much needed sewage or water system. Sometimes I had to get the Sheriff to accompany me. Sanitarians were not available at that time for the small towns. I had nightmares when it came to condemning septic tanks.

In a period of 27 years, I tried four times to get the streets paved during my period of active practice. I felt that the dust and gravel were unhealthy. The paving that was attempted at that time usually lasted about two weeks.

Gradually, as more people moved into the community from larger cities, more attention was directed toward improving the environment. Our schools began to take pride in their accomplishments. Mountain Home usually ranked high in accreditation.

However, all was not well with my practice. I was able to acquire a partner who was a hard worker and a conscientious physician, and the people liked him. We worked well together and never had any personal difficulties. I had a few scares isolated many miles from immediate help, particularly from the obstetrical standpoint. We initiated an effort to utilize a pair of beds for obstetrical patients who lived a long distance from Mountain Home. But I knew that we needed a hospital.

I made several attempts to interest the City Council and the Chamber of Commerce into building a small hospital, but no one felt we could afford it. They were probably correct, but I couldn't go on the way we were. I finally decided to enlarge our clinical facilities as many of the physicians in the larger communities had done

* Dr. Saltzman is a retired family practitioner from Mountain Home. He is a member of the AMS Fifty Year Club and the editorial board for *The Journal of the Arkansas Medical Society*.

fairly successfully. We built a small seven-bed facility with a delivery room and a surgery by cashing in my life insurance policy, getting a loan from my parents and finally being offered a substantial loan from the Peoples Bank. We set an opening date so people would have an opportunity to see what we had to offer. Before the opening day, every bed was full including a patient in labor on the X-ray table. Those were exciting days. Within three years it became necessary to add more beds.

More doctors began to move into the community, and more and more people moved into Mountain Home and neighboring territory.

One day, as he watched the expanded building program, my attorney and excellent personal friend, Tom Tinnon remarked, "Ben, mark my words, this community will in the near future become a medical center for northern Arkansas."

One of our retirees, a very active man in his 70's and a real worker in the Chamber of Commerce, approached me with a suggestion - he felt that we needed a general hospital. He had talked to others along this line and decided to ask me about my feelings in the matter since he knew that I had a major investment in my clinic.

He had talked to others and there seemed to be general interest. He wondered if I would object to his talking to the community at large. I informed him that I liked the idea so much that I would turn over most of my hospital beds and other equipment to a new hospital until it could acquire all the things it needed. He then asked me if I would head a steering committee to deal with the architects and builders. I informed him that I would be happy to do so.

I did have trouble with the architects who wanted to limit beds to 30 in number. We finally agreed on the building of a single large Ward Room that could be converted for bed space if needed.

Baxter General Hospital opened as an acute care hospital in November of 1963 with 39 beds and an active staff of four physicians. Today, Baxter County Regional Hospital is an ultramodern 191-bed facility which has grown from a small rural hospital to a referral medical center for northern Arkansas and southern Missouri. It is recognized statewide for its efficiency of operation and its provision of out-patient services. Its operating costs are the lowest in the state and probably the country, since Arkansas' costs are the lowest in the United States. Today, the hospital has an active staff of 64 physicians in every specialty except neurosurgery and major cardiac surgery. Except for recuperative beds, all rooms are single beds.

Having spent almost twenty years in Little Rock in many satisfying medical activities, I had not noticed the many changes that had taken place in Mountain Home until I returned upon retirement in 1991. With beautifully paved streets, curbs and gutters, beautiful, well kept parks, excellent schools and even superior athletic events, this community certainly has become the *Land of Opportunity*. I wish Tom Tinnon could have lived to see it now.

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Medicine in the News

Health Care Access Foundation

As of August 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,393 medically indigent persons, received 21,197 applications and enrolled 41,516 persons. This program has 1,736 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

News Briefs from the AMA

Physician-Assisted Suicide (Board Report 59) - In a nearly unanimous vote, the AMA reaffirmed its adamant opposition to physician-assisted suicide. In addition, it called for comprehensive physician education in caring for patients at the end of life. The AMA's position on physician-assisted suicide is grounded in ethical policy set by its Council of Ethical and Judicial Affairs (CEJA). CEJA authors and continuously maintains the AMA's Code of Medical Ethics, which has protected the patients of American for nearly 150 years.

Mandatory HIV Testing of Pregnant Women (Resolution 425) - Relying heavily on statistics showing that treating HIV-positive women during pregnancy reduces by two-thirds their risk of infecting their unborn children, the AMA endorsed mandatory testing and appropriate counseling of all pregnant women and newborns for HIV.

Ultimate Fighting (Resolution 405) - The AMA voted overwhelmingly to oppose ultimate or extreme fighting contests, which promoters brazenly advertise as the "bloodiest, most barbaric show in history." The AMA passed new policy that will strongly urge states that have not yet banned this activity to pass a law doing so in order to protect the lives of participants. The AMA also plans to study the feasibility of federal or state restrictions on the broadcasting of these events.

Fatigue, Sleep Disorders and Motor Vehicle Crashes (CSA Report 1) - America's doctors are taking the lead against what some call America's "hidden nightmare." A report passed by the AMA's policy-making House of Delegates indicates that the economic, medical and public health costs of sleep-related problems are ignored. This is particularly alarming because drowsiness and fatigue are known to be deadly factors in work and motor vehicle accidents. Every year, there are more than one million motor vehicle accidents attributable to lapses in driver awareness. The AMA report calls for increased public education about the link between sleep disorders, sleep deprivation and fatigue and accidents. While drowsiness and fatigue affect all

drivers, they are particularly dangerous for truck drivers and people who work nontraditional work schedules. The AMA also called for tougher federal enforcement of existing regulations on consecutive work hours.

Regulation of Tattoo Artists and Facilities - The "Rodman Resolution" (Resolution 506) - The AMA called for regulation of tattoo artists and facilities. The age-old activity of tattooing has come back into vogue - particularly among youngsters. The AMA passed the policy in response to concern over serious risks of bacterial or viral infection and allergic reactions in the application of tattoos. The AMA wants to see states regulate tattoo artists and tattoo facilities to ensure adequate procedures to protect public health. In addition, the new AMA policy calls on physicians to report any adverse reactions to tattoos in their patients to the FDA MedWatch Program. Currently, tattooing parlors are not uniformly regulated in this country.

Hard Liquor Advertising (Resolution 432) - In the wake of a new hard liquor advertising campaign by Seagram, the AMA voiced its strong exception by passing new policy calling for an immediate federal ban on TV advertising of hard liquor products on commercial television. This is the latest in a long list of established AMA policies supporting federal legislation restricting advertising and promotion of alcoholic beverages. The AMA's policies, in part, induced the liquor industry's recently rescinded voluntary ban.

Assurance of the Public's Health Aboard Cruise Ships (Resolution 429) - The AMA passed a policy calling for the immediate development of standards for providing medical care for passengers aboard cruise ships entering or leaving the U.S. Currently, there is no regulation or credentialing of cruise ship physicians or on-board medical care. The AMA wants to see assurances that usual and customary public health and medical practices are available on ships that are not of U.S. registry.

Domestic Violence (Resolution 426) - Does mandatory police reporting of domestic violence put victims in greater danger than allowing them to choose to "press charges"? This is a concern of many victim advocates. The AMA addressed the issue with a call for the Association to actively evaluate the desirability of a uniform national standard for persecuting domestic violence cases and will work with victim advocacy groups to assess the safety and effectiveness of current mandatory reporting policies.

Expansion of AMA Policy on Female Genital Mutilation (Resolution 513) - The AMA passed policy

condemning the practice of female genital mutilation (FGM). Defining the procedure as "a form of child abuse," the AMA resolved to work with the U.S. Dept. of Health and Human Services (HHS) to make FGM a "reportable condition" which would require that known incidence of the procedure would be reported to state health departments and to the Centers for Disease Control and Prevention (CDC). In addition, the AMA resolved to work with HHS to develop an educational program to provide culturally sensitive counseling to help immigrant communities understand the grave health risks associated with FGM, and to discourage young girls and their families from having the procedure performed.

Evidence-based Principles of Discharge and Discharge Criteria (CSA Report 4) - The introduction of drive-through deliveries made the country stand up and take notice of changes in the medical marketplace that have patients concerned that their insurance companies may be putting financial considerations before quality of care. The AMA passed a report that establishes an evidence-based criteria for determining when patients can safely be discharged from the hospital. The criteria puts patients and physicians back in the driver's seat allowing them to make medical decisions together without third-party interference.

AMA Challenges Health/Life Insurers and HMOs to Divest of Tobacco Holdings (Board Report 49) - As an extension of its 4/24 call for mutual funds to divest of any tobacco holdings, the AMA called upon health and life insurers and HMOs to do the same. The AMA's call for tobacco-free investments will be an annual campaign to provide health advocates with a method to ensure their financial investments do not profit from or support the tobacco industry.

Patient Protection Measure to Improve Disclosure of Health Plan Limitations on Patient Choice of Physicians (Resolution 115) - The AMA passed a resolution directing the AMA in implementing its patient protection legislative initiatives, to pursue the position that every health plan should include a bold type, front-page summary explicitly setting forth any plan limitations in choice of primary care physician, or access to specialists, in its marketing materials and written policies provided to members. The summary will also be required to contain easily understandable information on how physicians will be paid by the plan. The AMA believes making this information available to patients will make it easier for prospective health plan members to evaluate the health care services available under the plan, and will lead to better informed patients.

Inauguration of Daniel H. Johnson, Jr., M.D., as AMA President - Daniel H. Johnson, Jr., M.D., became the 151st president of the AMA. Dr. Johnson, a distinguished radiologist from Metairie, Louisiana, was

inaugurated in a ceremony before the AMA's House of Delegates. In assuming the AMA's top office, Dr. Johnson issued a strong call for patient choice - choice of their physicians and choice of their health plans - as essential to successful health system reform, and necessary to the preservation of the patient-physician relationship. Elsewhere in his Inaugural Address, he praised the growing diversity of medicine - in race, gender, age, specialty and practice setting.

Dr. Johnson was elected president by the House of Delegates in June 1996 and served as president-elect during the past year. He is clinical professor of radiology and otolaryngology at Tulane University and was co-founder of the American Society of Head and Neck Radiology. He received his medical degree from the University of Texas at Galveston.

Deaths from SIDS Drop

Deaths from Sudden Infant Death Syndrome (SIDS) dropped 30% from 1993 to 1995, according to the National Institute of Child Health and Human Development. Credit goes to the American Academy of Pediatrics' "Back to Sleep" campaign, urging parents to stop putting babies to sleep on their stomachs. - Reprinted from *The AHA Weekly NOTEBOOK*, July 23, 1996, Vol. 3, Number 28.

New Service for Healthcare Professionals

The Excedrin Headache Resource Center™, an educational outreach program sponsored by Bristol-Myers Products, announces a new 800# service providing free informational resources to healthcare professionals. Headache sufferers have had access to patient information through the toll-free number for nearly one year. Now physicians, physician assistants, nurses and other health professionals can call (800) 580-4455 to receive materials for themselves and their patients. The service offers the following free of charge: professional education materials, slide lecture kit on treating headache, continuing medical education programs, patient education materials, *Headache Relief Update* newsletter for patients, patient videotapes, Wellness program - a guide to conduct headache seminars in the workplace and Excedrin samples.

As First Year of MPH Program Ends, Arkansans Describe Impressions, Experiences, Plans

For the first time, Arkansans can receive a master of public health (MPH) degree without leaving the state. This summer, seven Arkansas students completed their first year of a new MPH program offered by Tulane University through the UAMS Area Health Education Centers (AHEC). Begun in the fall of 1995, the two-year program will be completed in the sum-

mer of 1997. Designed to accommodate the work schedules of practicing doctors, residents, nurses and other health professionals, the classes meet alternating Fridays and Saturday afternoons on the UAMS Campus.

Most of the Arkansas MPH students plan to be in public health administration. Since demonstrated management skills are required for upper-level management posts, the program (which includes specific fields such as epidemiology, environmental health sciences and health education) also focuses on broader issues, such as leadership skills, communicating important agency values to employees, dealing with changes in the environment, and planning and mobilizing resources to relate the operation of the agency to its larger community role.

Student Profiles - Carol Cox, a Nursing Quality Improvement Manager at the University Hospital, relocated from Kansas to the University of Arkansas at Little Rock (UALR) to complete a BS degree in health education last year. Now enrolled in the MPH program, Cox said she appreciates the opportunity to learn from leaders in public health. She also said *she likes the more interactive learning experience that is possible in the smaller classes*. Cox plans to teach health education and later hopes to develop a wellness center in Mountain Home.

Angela Gulley-Smith, a 1995 graduate of the University of Central Arkansas in Conway, (UCA) also holds a BS degree in health education. She enrolled in the MPH program to broaden her opportunities in the health education field and views the opportunity to work with Tulane University "an honor." Smith said she believes *an urgent need exists to organize and implement education programs focused on violence, teen pregnancy, and drug addiction. Programs such as these are desperately needed in inner-cities because these areas are often hard to reach*. When Smith completes her degree, she plans to work as a health educator in a hospital or the community. Smith says the MPH program is excellent and she "wouldn't trade it for anything."

Abdul Jazieh, M.D., a hematology/oncology fellow at UAMS, received his M.D. in Damascus, Syria. He came to Arkansas to specialize at UAMS. Dr. Jazieh's credentials also include a diplomat for the American Board of Internal Medicine. He is board eligible for medical hematology and oncology and a member of the UAMS faculty. Dr. Jazieh enrolled in the MPH program to help him develop cancer intervention and education programs and expects the MPH degree will enhance his ability to obtain grants for health education programs. *Dr. Jazieh believes Arkansas has a great need for public health education and has a potential for many projects because the state has a big shortage of health educators.*

Viju Gopal, D.D.S., received her dental training in her home country of India. A four-year resident of Arkansas, Gopal enrolled in the MPH program to acquire further post-graduate education toward her goal of a position as a director of dental health in Jamaica. Dr. Gopal said that in particular, *she appreciates two instructors from Arkansas who shared first-hand experience with public health needs and access to public health information in Arkansas*. Gopal plans a preventive dental health project with public school second graders for her capstone project (a real "hands on" community health project).

Indu Soora, a medical technologist who received her formal training in India, said she enrolled in the MPH program because she wanted to pursue a career in the medical field. Soora sees a need to educate the public about how and where to find medical resources most suitable for their needs. She said that uneducated and economically disadvantaged individuals should be the focus of these efforts since basic medical resources are often unavailable to them. Soora says *the MPH is an excellent program that will have positive effects in the community*.

Mike Anders, Education Diagnostics Manager at Arkansas Children's Hospital (ACH), holds a BS degree from Louisiana State University (LSU) and an Associate degree in respiratory technology from UAMS. He enrolled in the MPH program because it presents the opportunity to work with Tulane University. *Anders is excited about the curriculum and believes the program is "excellent."* He particularly appreciates the professional treatment by the professors who are very distinguished in their fields. Career possibilities are wide open, but Anders eventually hopes to pursue a doctorate in public health.

Donald Simpson, a cytotechnologist at John L. McLellan Memorial Veterans Administration (VA) Medical Center moved to Little Rock from his hometown of Ruston, Louisiana, to train in a health-related field at UAMS. Simpson holds a BS in microbiology from Louisiana Tech University (LTU) and a BS in cytotechnology from UAMS. *Simpson said Arkansas has a great need for public health education.* He believes "health educators need to realize that we are all in this together." For Simpson, the caring and professional faculty as well as the challenging course work make the MPH program a positive and rewarding experience. Once he completes the program, he hopes to use his degree within health services at the VA Hospital.



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AMS Newsmakers

Dr. Donald L. Cohagan, a family practitioner in Bentonville, recently received the Spirit of Service award from the Arkansas Health Care Access Foundation. The award is given to physicians who generously donate free medical service to needy persons in Arkansas as qualified through the Department of Human Services.



Donald L. Cohagan, M.D.

In recognition of **Dr. Thomas H. Hickey's** services to the health care community of Conway County, J.T. Compton, owner of Brookridge Life Care and Rehabilitation Center, placed a bronze plaque dedicated to the physician at the entrance of the new facility. Dr. Hickey is a general practitioner in Morrilton. - *Photograph taken by Petit Jean Country Headlight photographer Dennis Massingill.*



(From left) Thomas H. Hickey, M.D., and J. T. Compton

Dr. William Earle Jennings, who began practicing medicine in Rogers in 1946, was recently honored by Mayor John Sampier, the staff at St. Mary's Hospital, community leaders and his son (also a physician) for fifty years of service to the hospital and community. Although officially retired, the 77 year-old physician still sees patients at various nursing homes.

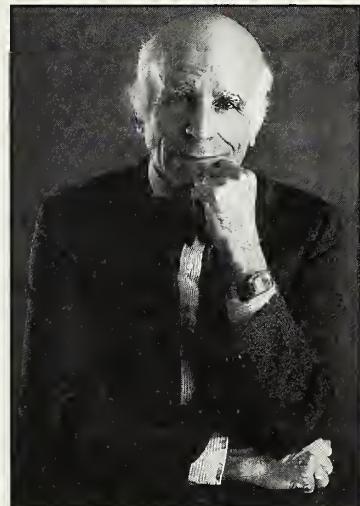
Dr. R. Jerry Mann, medical director of the Primary Care Center located at UAMS Medical Center, was recently elected to serve on the board of directors of the American Board of Family Practice. He will serve a five-year term during which he will be responsible for granting or revoking medical licenses in family practice.

The Arkansas Chapter of the American College of Radiology recently recognized **Dr. George Regnier** for meritorious service to the clinical practice of radiology in Arkansas. His colleagues in the radiology department of Baxter County Regional Hospital delivered the honorary plaque to him.

Dr. Dow B. Stough has written and recently published a book titled, "Hair Replacement: Surgical and Medical." The book contains surgical and medical information along with 759 illustrations and 13 color plates. The book has 55 contributors from throughout the world.

Dr. Jerry L. Thomas recently retired from his orthopedic clinic in Heber Springs. The clinic, which opened in 1989, has served more than 5,000 patients.

Dr. Eugene Towbin was recently honored as he retired as chief of staff of the John L. McClellan Memorial Veterans Hospital. He has been associated with the hospital for 40 years. Dr. Towbin also was presented with the "Distinguished Career Award" sent by Jesse Brown, secretary of Veterans Affairs.



Eugene Towbin, M.D.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of July 1996 are: William L. Diacon, Bella Vista; Stacey M. Johnson, Mountain Home; John Wayne Joyce, Little Rock; Patricia Ann Knott, Sherwood; James S. Magee, Little Rock; Laura Reeves McLeane, North Little Rock; Virginia B. Melhorn, Little Rock; Dac Tat Pham, Brinkley; Gregory F. Ricca, Jonesboro; Joseph T. Wilson, Jonesboro; Michael W. Young, Dardanelle.

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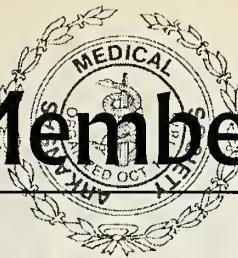
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New Member Profile



William L. Paul, M.D.

PROFESSIONAL INFORMATION

Specialty: Anesthesiology

Years in Practice: 21

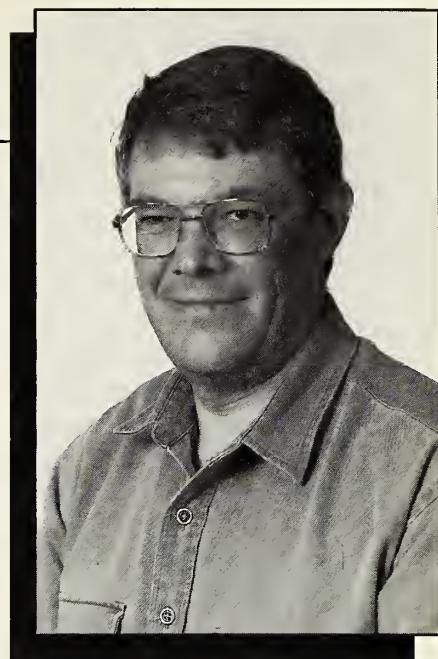
Office: Little Rock

Medical School: University of Kentucky College of Medicine,
Lexington, 1972

Internship: University of South Florida, 1973

Residency: University of Florida, 1975

Honors/Awards: Physician's Recognition Award



PERSONAL INFORMATION

Family: Wife, Becky, and daughter, Wendy, 14 years old

Date/Place of Birth: February 14, 1946 in Hopkins County, Kentucky

Hobbies: fishing and hunting

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: a fishing guide

Historical Figure I most identify with: Thomas Jefferson

Favorite junk food: peanuts

Most valued material possessions: my boat

The turning point of my life was when: people became more important than money or ideals

Favorite vacation spot: Florida

One goal I haven't achieved yet: to be the best physician I can be

One goal I am proud to have reached: being named Teacher of the Year

Favorite childhood memory: Sunday dinners at our farm with everyone in the family present and playing

When I was a child, I wanted to grow up to be: a scientist

One of my pet peeves: disorganization

First job: mowing lawns

Worst job: cleaning women's restrooms

My life philosophy: Is to attain peace in my life by understanding that we all have different agendas, and that's okay.

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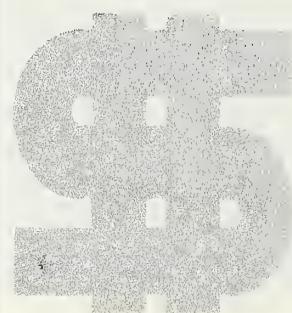
Springdale - October 2

El Dorado - October 16

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Assessing Clinical Skills of Medical Students

Jeanne K. Heard, M.D., Ph.D.*

Ruth Allen, Ph.D.**

Patrick W. Tank, Ph.D.***

Gerald J. Cason, Ph.D.****

Mary Cantrell*****

Richard P. Wheeler, M.D.*****

Abstract

The clinical skills of sophomore medical students at the University of Arkansas are being assessed through the use of the Objective Structured Clinical Examination (OSCE). This exam was developed in order to better standardize the evaluation of practical clinical skills. The exam uses standardized patients, who are lay people trained to accurately and consistently portray a patient encounter. Faculty members at UAMS authored clinical cases for 20 patient encounters that test history taking, physical examination and communication skills. Each student interacts with the patient while being assessed in a standardized way, and then is given educational feedback by a faculty member. Students who do not pass the exam, undergo a remediation program prior to entering the junior year.

Introduction

Improving the professional education of medical students is an ongoing concern of the leaders of academic medical centers. During their first two years, medical students in a traditional curriculum are assessed primarily by recall of facts. Assessing a student's clinical abilities is not a simple process for it requires

explicit criteria for the systematic evaluation of clinical performance. Because medical education has been focused on acquisition of facts, students' abilities to perform thorough history and physical examinations or to develop competent interpersonal or communication skills have been inadequately assessed by standardized or objective methods.^{1,2,3}

The Objective Structured Clinical Examination (OSCE) was developed by Hardin in Scotland in 1975 to better standardize the evaluation of clinical skills in medical training.⁴ The OSCE is a practical examination where the student is asked to carry out a single task or set of tasks in a series of stations. In one station the student may be instructed to interview a patient about a headache. In another he or she may read an x-ray or complete a written exercise relevant to the preceding station. In another station the student may examine a patient's abdomen. As the student progresses through the series of stations, faculty members observe and evaluate his or her performance by completing a standard checklist.

Since 1975, the OSCE has become more widely used in medical schools as it represents the first opportunity to directly and reliably assess clinical performances in medical education. During the last decade, a variety of multiple-station examinations have been developed at various medical schools.⁵⁻⁹ These include short station clinical encounters that focus on a single skill or a particular set of skills or a longer station encounter that assesses the ability of the student to carry out the complete episode of clinical performance for the patient problem. The OSCE or short station examination is usually done early in clinical training to assess the students' skills of physical examination and taking a focused history. A more in-depth clinical skills

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*** Patrick W. Tank, Ph.D., is Professor of Anatomy, College of Medicine, UAMS.

**** Gerald J. Cason, Ph.D., is Associate Professor, Office of Educational Development, UAMS.

***** Mary Cantrell is Assistant Director, Standardized Patient Program College of Medicine, UAMS.

***** Richard P. Wheeler, M.D., is Associate Dean for Student and Academic Affairs, College of Medicine, UAMS.

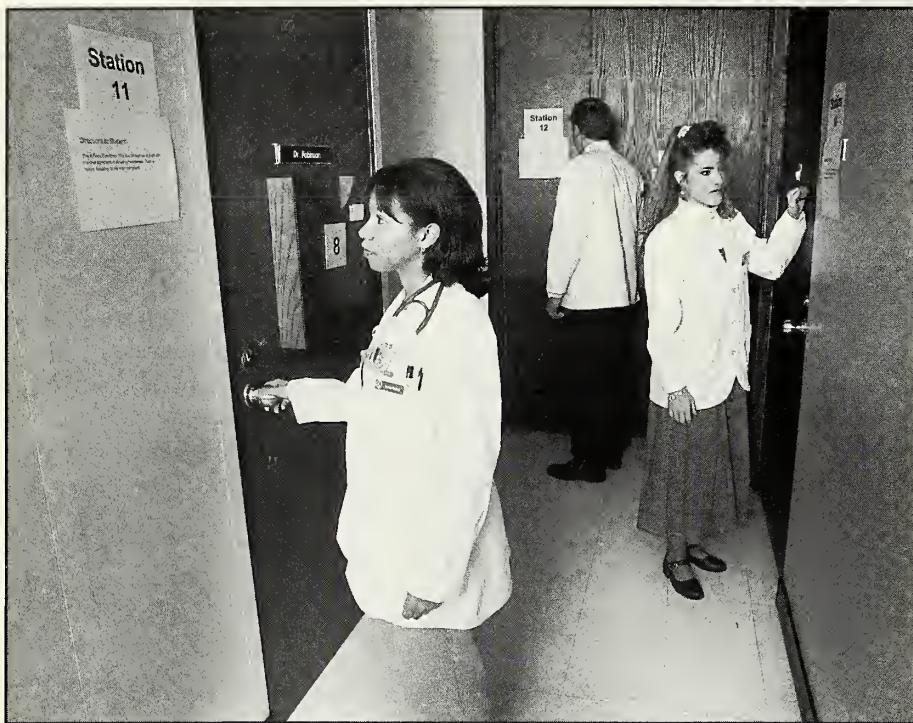


Figure 1: Students read a short clinical scenario prior to entering the clinic room and interacting with the SP.

examination is usually performed during the clinical clerkships or at the beginning of the senior year to see if the student is capable of carrying out a complete encounter, applying the skills appropriate for the particular problem. It is a more in-depth test of clinical competency, including patient management skills. Thus, the use of practical clinical skills examinations using patients is now more common, and in the near future will be part of the licensing examinations for all physicians in the United States.

In the past, students in the College of Medicine at the University of Arkansas for Medical Sciences (UAMS) have had few opportunities to practice this type of clinical skills examination, and no means to demonstrate their clinical competency by a practical examination using live patients. Therefore, in 1991, at the recommendation of the Dean of the College of Medicine, the Curriculum Committee investigated ways to develop this type of program at UAMS. Faculty visited medical schools at the University of New Mexico and the University of Arizona in order to observe clinical skills examinations. In 1992, a subcommittee of the Curriculum Committee recommended that a feasibility study be conducted for developing an Objective Structured Clinical Examination at UAMS.

Feasibility Study

In 1992 a general internist in the Department of Medicine was appointed to direct the feasibility study;

twenty-five percent of her non-clinical time was allocated for the study. An OSCE subcommittee of the Curriculum Committee consisting of clinicians in pediatrics, obstetrics/gynecology, neurology, surgery, family practice and internal medicine, an educational specialist and an anatomist was assembled. Their responsibilities included determining the administrative aspects of the clinical skills exam, case writing and developing a proposal to be presented to the College of Medicine faculty.

Since the objective assessment of clinical skills was a new endeavor at UAMS, the subcommittee decided to begin with the objective assessment of clinical skills at the sophomore level. The subcommittee reasoned that once the infrastructure was established, a clinical competency examination for seniors could be

more easily developed. Twenty cases were developed to test basic clinical skills of interviewing, communication and physical examination. Because these skills have not been fully developed at the sophomore level, the subcommittee believed that the OSCE should be educational as well as evaluative. Sophomores could be assessed on their skills with a standardized checklist and then given feedback by faculty observers.

The examination was first given in 1993 to a small group of students as a trial run so that logistical requirements could be estimated and problems resolved. The following year all 144 students took the examination, but were not required to pass it. In 1994 a proposal to have an Objective Structured Clinical Examination for sophomore medical students was approved by the College of Medicine faculty. Currently, students must pass the examination to progress into the junior year, and students who fail must complete remediation before they progress.

Standardized Patient

Patients used in the OSCE are called standardized patients. They are lay persons trained to accurately and consistently portray a patient encounter. The concept of standardized patients, also known as simulated patients or SPs, was first developed 30 years ago by Dr. Howard Barrows to solve an assessment problem in a clinical clerkship in neurology.¹⁰ He taught lay people to simulate various neurological findings

for students on the service. The students not only learned how to perform the mechanics of physical examination, but also were given valuable feedback by the "patients" regarding their interviewing and interpersonal skills. Since that time SPs have become widely used and are now a very valuable tool in medical education and assessment.

For approximately 20 years at UAMS, a form of SP known as the teaching associate has been used to teach and evaluate students' performance of the gynecological examination. However, the use of SPs in other areas of the curriculum is limited. To support the needs of an Objective Structured Clinical Examination, the College of Medicine developed a more formal program of SPs. SPs are hired based on their suitability for a particular case for the OSCE. Recruitment involves gathering demographic and medical history data from a potential standardized patient, and interviewing the person to determine his/her interest and ability. The potential SP must also have an abbreviated physical examination.

Once an SP's suitability has been determined, the trainer discusses a particular case with the SP, helping him or her relate to the situation and adapt as much as possible from his or her own history. For instance, at times the SP may use his/her own name, occupation or past medical history to incorporate in the case. Prior to the OSCE, the SP "performs" the case with a mock student in a dry run session while being observed by the case author to ensure that the presentation is correct. For the OSCE, four SPs are trained for each case. Each SP must present the same scenario to each student. Their dry run sessions are videotaped so that their portrayal of the case can be assessed to be repeatable and reliable.

Design of the OSCE

Medical students at UAMS take a traditional curriculum of basic science courses during the first two years, followed by two years of clinical training. Students have three introductory clinical courses during the first two years that prepare them for the OSCE. The Introduction to the Medical Profession course, given during the first semester of the freshman year, provides the students with opportunities to learn basic interviewing techniques. During the second semester of their sophomore year, students take Physical

Diagnosis in which they learn the basics of history taking and physical examination techniques, and Mechanisms of Disease which concentrates on the pathophysiology of specific diseases.

The OSCE is given at the end of final examination week in the sophomore year, and is comparable to a biology or gross anatomy laboratory examination. In a laboratory examination, students spend a specific amount of time at a given station and respond to a set of questions on which that station focuses. The OSCE is given in a clinical setting, called a station, which approximates an exam room. Within each station there is a standardized patient, a specific set of items or tasks to be performed, a faculty evaluator, and an SP evaluator.

The examination begins with the student reading a short clinical scenario posted on the entrance to the clinic room or station (Figure 1). This gives the student specific instructions regarding the station. At the sound of the buzzer, the student enters the station and has 5 minutes to perform the specific task with the standardized patient. The student is observed by a faculty evaluator and an SP evaluator (Figure 2). After 5 minutes, the faculty evaluator stops the activity and provides educational feedback to the student during one and one-half minutes of interactive time (Figure 3). When the buzzer sounds again, the student enters the hallway and proceeds to the next station to repeat the process.

The OSCE consists of 16 clinical stations, 8 of which assess physical examination skills (Figure 3), and 8 stations which assess history taking and interviewing techniques (Figure 2), plus 4 rest stations. Eighteen



Figure 2: The student is observed by a faculty evaluator and an SP evaluator as he elicits a history from the standardized patient who has presented with a headache.



Figure 3: The faculty evaluator provides educational feedback to the student on the correct method to perform the abdominal examination.

students can be tested at one time. The exam is given in the Ambulatory Care Center on the weekend, using the exam rooms normally used for clinic patients during the week. The rooms are prepared on Friday night with the necessary equipment for each task and the appropriate evaluation materials. In order to examine the entire class over a 12-hour period, 2 identical examinations are conducted simultaneously. Two sets of student groups progress through parallel sets of stations concurrently, and the rotations are repeated 4 times throughout the day. Four faculty evaluators are trained for each case: two evaluate and provide feedback in the morning examinations, and two evaluate and give feedback during the afternoon examinations.

Cases used in the exam have been written by faculty in the College of Medicine and submitted to a committee for review and selection. A case writing blueprint exists to guide authors in their efforts. Cases are usually based on a real patient or a combination of real patients who have been seen by the case author. After the case is written, it is submitted to the review committee to ensure its appropriateness and validity. Currently, UAMS has approximately 30 cases available in its "library." Each year several are added so that a variety can be chosen for the examination. After the case has been reviewed and approved, faculty and SPs must be recruited and trained for each case.

Faculty Training

Because the objective assessment of clinical skills in an examination format was new to faculty in the College of Medicine, they also had to be trained in how to score the standardized checklists and give effective feedback. Faculty evaluators are usually clinicians from UAMS and the Area Health Education Centers. Several basic scientists and faculty from the College of Nursing also participate.

Faculty members are trained in several steps to assure consistency with regards to scoring. Initially, they observe the case scenario presented by an SP with a mock student being scored by the case author. The standardized checklist is presented and discussed, and questions are answered by the author. This is done so that all clinicians will view the case in the same way and score the students in the same way. Possible student questions are also presented and answers offered at this time. Then the case is presented to the clinicians again, but this time the mock student does not perform well so that the faculty members have a chance to score the event again and compare results with those of the case author. Again, questions are answered so that all faculty involved in the case score the student's performance consistently and reliably.

Evaluation

The primary objective of the OSCE is to obtain valid measures of each student's clinical performance skills in medical history taking, physical examination and communication. A second objective is the delivery of informative feedback by a faculty evaluator following the evaluator's observation of the student-SP encounter.

In preparation for the OSCE, specific evaluation forms have been developed. The student score sheets (standardized checklists) are designed specifically for each case and provide a list of standard items to be used by the faculty for evaluating student performance. Each case's score sheet includes specific behaviors that are general in nature and relate either to the focused physical exam (e.g. hand washing, draping) or the focused history exam (e.g. onset, duration). Other items relate directly to the case in question (e.g. percussion of liver span for the abdominal pain case or asking about high blood pressure on the case about chest pain). All history cases include the same set of 9 items to evaluate the student's communication skills.

Present in the room during the exam are the student, a faculty evaluator, and two SPs, one of whom portrays the case to the student and another who evaluates the performance along with the faculty educator. There are three possible scores for each behavior: honors, pass or fail.

Several other evaluations are also obtained during the exam. In addition to the faculty evaluating the students,

faculty also evaluate the exam itself, giving the OSCE subcommittee valuable feedback for future OSCEs. The faculty also evaluate the SP's portrayal of the case. Therefore, any discrepancies between SPs portraying the same case can be determined and corrected. The SPs evaluate the overall OSCE process, which also assists the subcommittee in improving future examinations. In addition, the students evaluate the exam process and the faculty feedback by judging the appropriateness of each case and the type of feedback. Faculty are rated by the students and receive scores on their individual feedback performance that can be used for self-improvement as well as in the promotion and tenure process.

After the OSCE score sheets are processed by an optical scanning machine, the data are analyzed and reported by computer. Students are provided a set of scores following the OSCE. The total physical examination score is an average of the 8 physical examination stations. For the 8 history cases, students receive an overall history case score, a basic interviewing score, and a communications score. Students who attain a 60% average score on all cases pass the OSCE.

Remediation

Students who do not meet the minimum 60% cumulative score on the examination undergo a remediation program during the weeks prior to their junior year. Each case has a remediation plan written and conducted by the case author. It must be successfully completed before the student can enter the junior year. Relevant information about student performance from the OSCE is provided to freshman and sophomore course directors so that they can make changes in curriculum content and presentation format.

Conclusion

Developing and implementing an objective assessment of clinical skills for medical students is a complex and expensive process. Essential requirements for success are thorough planning, strong support of the administration and faculty, a diligent and interested coordinating committee, and well trained standardized patients. Results of an OSCE can provide assurance that students are gaining the clinical skills necessary to provide quality patient care. Results of an OSCE can also provide an evaluation of a current curriculum and an impetus for constant improvement and revision.

In the future the National Board of Medical Examiners (NBME) will require students to pass an examination to be given in the first part of their senior year as part of the United States Medical Licensing Exam (USMLE). This exam, the Clinical Practice Exam or CPX, is similar to the OSCE given to sophomore students, but requires a greater degree of proficiency in clinical skills by the senior student. Currently, UAMS

is working with the NBME to offer a prototype of this more advanced examination to senior students at UAMS, so that they will be better prepared to take and pass the USMLE successfully. Evaluations such as these are just another way medical schools can ensure that graduating students and future physicians receive the highest quality of medical training in the care of patients.

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Breastfeeding in Arkansas: Trends in the Northeast Region and Physician Self Assessment Quiz

Mark Albey, M.D.*

Sherry Rickard, R.N., I.B.C.L.C.**

Warren Skaug, M.D.***

Introduction

Prevalence of breastfeeding in the United States has gone through several changes over the past twenty-five years. From a nadir in 1970 of 24.9% to a peak in 1982 of 61.9%, the rate had decreased by 1989 of 52.2%.¹ Of those mothers who initiate breastfeeding, nearly 80% have discontinued by six months.²

There are a number of known influences on the choice to begin and to continue breastfeeding. Being young and poor are important factors working against breastfeeding. But nursing mothers have cited poor or conflicting advice from medical personnel as a significant detriment to successful breastfeeding.³

Physicians universally advocate breastfeeding, but often find themselves ill equipped to handle specific problems or questions. There is in fact a dearth of practical breastfeeding information in current medical literature. The field has become the domain of the lactation specialist, with its own specialty publications.⁴

The purpose of this review is two-fold: We have reviewed the St. Bernard's Regional Medical Center breastfeeding experience for the past four years, to allow comparison with other obstetric services throughout the state, and we have offered a "breastfeeding I.Q." quiz for physicians, with answers provided.

Methods and Findings

Data were collected at St. Bernard's Regional Medical Center (SBRMC), a 325-bed regional referral center, beginning in 1991. At this time, a Certified Lactation Consultant was employed at SBRMC. Through use of patient surveys and telephone follow-up, the number of patients who were breastfeeding at the time of discharge, and at subsequent intervals, was deter-

mined. An approximate average of 1,100 infants were delivered each year during this study period. In 1991, twenty-two percent of mothers were breastfeeding upon discharge. By 1994, this number had risen to 48%. The only controlled variable that changed over this time period was the employment of a full time Certified Lactation Consultant.

Data from 1993 were analyzed to see how many mothers who were breastfeeding at the time of discharge were still breastfeeding six months later. Of 100 women who were breastfeeding at discharge, only 20 were still breastfeeding six months later. There were no statistical differences in the educational levels or other social variables in these two groups. Of the 80 who stopped breastfeeding, 75 discontinued because of either decreased or perceived decreased milk supply. All but five of these mothers had supplemented their breastfeeding with formula prior to 3 weeks of age. The remainder discontinued breastfeeding at the advice of their physician because of jaundice.

Of the 20 patients who continued breastfeeding their infants six months after discharge, one had employed early supplemental feeds. This group was questioned regarding the quality of advice from their physicians and their physicians' nurses. Only one of these 20 patients stated that she received what was perceived to be "good advice" from medical personnel. The most helpful support systems mentioned were the Certified Lactation Consultant and the LaLeche Organization.

In addition to the survey results, several other observations over this four-year period are notable. Newborns with ankyloglossia were identified and followed. There were a total of 13 infants born with "functionally significant" ankyloglossia to breastfeeding mothers. These were defined by the mother complaining of very sore nipples at less than 12 hours after delivery, with an infant who was unable to extend the tongue over the lower gum line. Six of these infants underwent frenulectomy in the nursery, performed by their pediatrician, their family physician, or an ENT physician. Three of the 13 infants underwent

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frenulectomy one to four weeks later because of poor weight gain or cracked nipples. There were no complications reported. All of these infants were able to breastfeed successfully and were still breastfeeding nine months later. Of the four patients who did not undergo frenulectomy, two were able to breastfeed successfully after six weeks of intensive instruction from the Certified Lactation Consultant. One infant discontinued breastfeeding because of poor weight gain and another because of severe soreness and cracked nipples in the mother.

Ten women who had received breast augmentation and three who had undergone breast reduction were also followed. Of those with augmentation, none were able to breastfeed successfully. None of the women with breast reduction were able to breastfeed exclusively. Some partial success was obtained with supplemental devices.

No quantitative data were collected on mothers who smoked, but it was our observation that most women who smoked decided not to breastfeed. Of those women who did smoke and chose to breastfeed, smoking more than one and one half packs per day was associated with an inadequate milk supply, based upon feeding behavior and poor weight gain, whereas, consumption of less than one pack per day allowed for successful breastfeeding in several cases.

Discussion

Several observations merit further discussion. The percentage of breastfeeding mothers at discharge from St. Bernard's Regional Medical Center in 1991, was less than one-half of published national norms. By 1994, this percentage had more than doubled and now approximates the national average. The increase is in direct relation to the full time employment of a certified lactation consultant and a focused breastfeeding education program at our hospital. This phenomenon illustrates a meaningful role for patient education and support in the decision to Breastfeeding.

The rate of discontinuance of breastfeeding at six months is similar in our experience as in published national statistics.^{6,7} There are many possible reasons, but one prominent correlate with discontinuance was early (less than 3 weeks) supplemental feedings. These findings have clear implications for supplementation policy in delivering hospitals.

Survey results indicated that the quality of physician advice was perceived as poor and that the most valued support sources were the Certified Lactation Consultant (CLC) and the LaLeche League. This area may represent a "weak link" in many physicians' parental counseling skills and a team approach to breastfeeding support is suggested.

A number of Arkansas communities currently have Certified Lactation Consultants (CLC) whose training includes at least 2,500 hours of breastfeeding counseling, a two- to five-year formalized and self-directed training program, passage of a board exam and 30 hours

of annual continuing education in their specialty.⁸ CLC's are capable of handling complex and difficult breastfeeding problems.

Many hospitals and medical practices in the state also employ breastfeeding educators. Though their training is less extensive (training programs vary), these individuals are capable of teaching prenatal breastfeeding classes and assisting with normal breastfeeding instruction in primary care settings.

In addition to these, the Arkansas Department of Health, Office of Breastfeeding Services has enhanced the breastfeeding educational capability of the county health units throughout Arkansas.

Ankyloglossia and the therapeutic role of frenulectomy represent a controversial issue. The fourteenth edition of Nelson's Textbook of Pediatrics states that a short lingual frenulum is of "no known functional significance."⁹ However, several recent articles support the role of ankyloglossia as a detriment to successful breastfeeding and the benefit of tongue-clipping in this setting.^{10, 11, 12} Our own four-year experience with breastfeeding newborns suggests there may indeed be a niche for this procedure in clinical medicine.

Nursing mothers who have undergone breast augmentation or reduction were encountered regularly, reflecting the prevalence of these procedures in our society. Our results are reflective of published papers and demonstrate an encouraging success rate for mothers with augmentation, though complete success at breast is substantially poorer in those with breast reduction.¹³ Both groups require the familiarity of the clinician with their specific needs.

Smoking history is an important component in breastfeeding initiation and success rate. Our experience suggests that barring cessation of smoking, less is definitely better, and mothers unwilling to quit may still successfully breastfeed. Several authorities suggest that smoking mothers be encouraged to breastfeed and that the advantages to the infant outweigh the disadvantages.^{14, 15, 16}

The multitude of advantages of breastfeeding to an infant's growth, development and general health are well documented and are beyond the scope of this review. But, for the physician, communication of practical current knowledge in breastfeeding method and technical problem solving, so critical to the success of breastfeeding mothers, has not kept pace with other preventive health care issues. We would suggest that this is best done through a team approach to include, where possible, a trained specialist in this arena. Additionally, it is important for physicians to personally stay current with this evolving field. Both efforts are important to maximize breastfeeding success in our communities.

Recommended Resources

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* Laurence RA. *Breast-feeding: A Guide for the Medical Profession*. St. Louis: CV Mosby Co. (1994).

BREASTFEEDING I.Q. QUIZ

(adapted from C.A. Lewinski)⁵

This quiz is intended as a brief learning exercise and self assessment tool for physicians and other health professionals who deal with breastfeeding mothers. The questions reflect a number of frequently encountered breastfeeding situations. No scorecard will be kept!

- | | |
|--|---------------|
| 1. Mothers should be instructed to start out nursing 3 - 5 minutes on each breast to prevent sore nipples. | TRUE
FALSE |
| 2. The let-down response almost always occurs within the first minute of breastfeeding. | TRUE
FALSE |
| 3. Giving formula between breastfeeds during the first three weeks produces nipple confusion and interferes with the mother's milk supply. | TRUE
FALSE |
| 4. Sending home a discharge packet of formula could undermine the success of a breastfeeding mother. | TRUE
FALSE |
| 5. Glucose water helps decrease the physiologic jaundice often seen in breastfed babies. | TRUE
FALSE |
| 6. A 3-1/2 day old term newborn with a bilirubin of 15 mg% needs to discontinue breastfeeding for at least 24 hours. | TRUE
FALSE |
| 7. Newborns should be allowed unlimited access for breast feeding from the moment of birth. | TRUE
FALSE |
| 8. Nipple shields are an effective routine treatment for sore nipples. | TRUE
FALSE |
| 9. Mothers with inverted nipples cannot breast feed. | TRUE
FALSE |
| 10. If a breastfeeding baby has thrush, the mother's nipples must also be treated after each nursing. | TRUE
FALSE |
| 11. When a mother has non-purulent mastitis, breastfeeding must be discontinued on the affected side. | TRUE
FALSE |
| 12. After the first month of age, it is not unusual for an exclusively breast fed baby to go 4 to 5 days without having a stool. | TRUE
FALSE |

ANSWERS ON NEXT PAGE

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BREASTFEEDING I.Q. QUIZ - ANSWERS

(Based on materials in Recommended Resources)

1. FALSE. Lactation studies show that the most common causes for nipple soreness are poor latch-on and incorrect positioning, and not the duration of feeding.
2. FALSE. The let-down response (milk ejection reflex) requires a variable amount of time, usually from 1 - 3 minutes. Mothers' expectations must be addressed accordingly.
3. TRUE. "Complementary feeds" decrease time on the breast and therefore reduce prolactin levels and milk production. Nipple confusion is a documented phenomenon. Ultrasound studies demonstrate that a chewing motion predominates on the bottle vs. a suckling movement on the breast.
4. TRUE. Early (first three weeks) supplemental formula feedings have been shown to decrease success of breast feedings and the practice has no evident value. The availability to nursing mothers of free formula through hospitals or doctor's offices is an endorsement of its use.
5. FALSE. Glucose water increases urinary output. Physiologic excretion of bilirubin is through the gastrointestinal tract.
6. FALSE. Physiologic jaundice is not modified by changing to the bottle. Increasing breast feeds to a minimum of eight per 24 hour period and assuring proper technique are the appropriate solutions. "Breast milk jaundice" is relatively rare and occurs after the first week of life.
7. TRUE. Frequent feeding, including nighttime feeds increase prolactin levels and milk production. Healthy infants are alert and ready to feed from the moment of birth and with proper body heat precautions, they may be allowed to feed immediately post partum.
8. FALSE. Nipple shields have been shown to decrease the milk supply 40 - 70% and to cause nipple confusion in the infant.
9. FALSE. Inverted nipples noted during the last trimester of pregnancy can usually be corrected with breast shells worn 8 hours per day prior to delivery, allowing successful breastfeeding.
10. TRUE. Maternal monilia can cause significant nipple soreness and is almost always present in the setting of a nursing infant with thrush.
11. FALSE. Mastitis is usually caused by a plugged duct that has gone unresolved. Breastfeeding in this situation is of no risk to the baby and helps to resolve the problem. The penicillin and cephalosporin antibiotics commonly used to treat mastitis do not present a problem to the nursing infant.
12. TRUE. The typical stool pattern for a breast fed baby, once the maternal milk supply is in, includes a minimum of four stools per day for the first 2-1/2 to 3 weeks. Bowel movements subsequently slow down dramatically and are variable - from once daily to as infrequent as every 4 to 5 days. If the infant appears healthy and the stools are soft, infrequent stools at this age are not abnormal.

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Breastfeeding in Arkansas: The Role of the Arkansas Department of Health

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In 1978, the Surgeon General's report on Health Promotion and Disease Prevention identified breastfeeding as a national health objective.¹ By the end of the 1980's, the incidence of breastfeeding was actually declining among all women with the lowest rates in the lower socioeconomic groups. In Arkansas, only 35 percent of delivering women initiated breastfeeding in 1989. A token 8.2 percent continued for six months.² Recognizing the trend, the Surgeon General established new goals in 1990. These new targets were for 75 percent of women to initiate breastfeeding and for 50 percent to continue for 5 or 6 months by the year 2000.³ Goals set by Arkansas in 1990 reflect the lower breastfeeding rates in the state. By the year 2000, Arkansas plans to have 50 percent of delivering mothers breastfeeding at hospital discharge and 20 percent continuing for 5 or 6 months.⁴

The Surgeon General convened a conference to examine the barriers to breastfeeding in 1984. The conference formulated ways to overcome the barriers, particularly among minorities, the young and uneducated families. Barriers identified by the conference included the lack of adequate knowledge among health care providers and their patients and the availability of free or reduced cost formula through programs such as WIC.⁵ New moneys were authorized to overcome these barriers. The WIC Reauthorization Act of 1989 established a number of requirements for the promotion of breastfeeding to those families who qualify. The Maternal Child Health Bureau of the Department of Health and Human Services (DHHS) made available other funds for grants of Special Regional and National Significance (SPRANS). Dr. Linda Black, a former Arkansas Department of Health pediatrician, created the

Office of Breastfeeding Services (OBS). Her vision was to utilize the talents of the University of Arkansas for Medical Science (UAMS), Arkansas Children's Hospital and the ADH to promote and support breastfeeding in Arkansas. She was awarded a SPRANS grant. Additional funding was later provided by Arkansas WIC. She assembled a group of physicians, nurses, and nutritionists from these institutions, and was able to get intensive training regarding breastfeeding and lactation for this team.

Since 1990, funding has changed as has the director and staff. WIC now provides 80% of the funding with the remainder coming from other federal grants. The staff currently consists of a nutritionist, a maternal-child health nurse, a social worker and a peer counselor all of whom are Certified Lactation Consultants. The administrator holds a doctorate in nursing. A pediatrician serves as medical consultant. The current mission of the Office of Breastfeeding Services is threefold: To promote the practice of breastfeeding, to educate health care providers about all aspects of lactation, and to support the family that chooses to breastfeed.

Promotion of breastfeeding

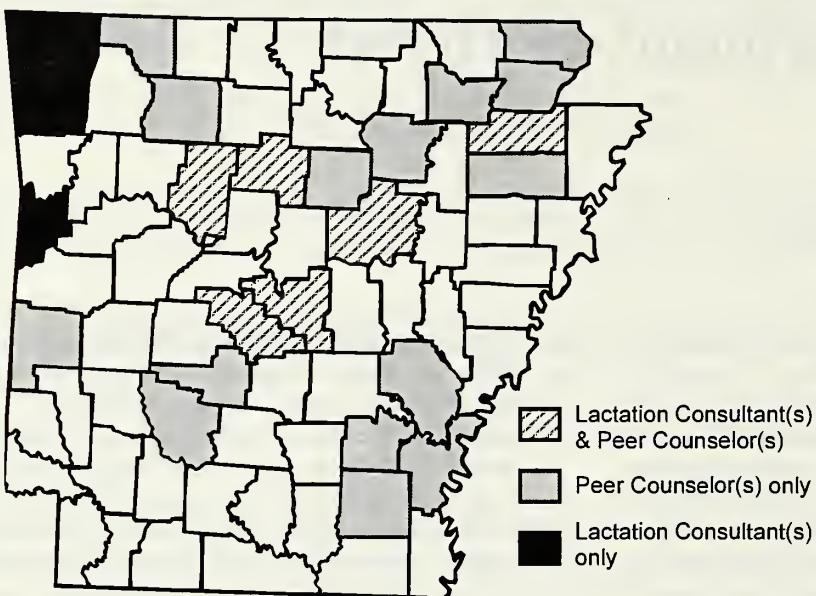
The target of promotional efforts at OBS is the WIC client. The office helps the WIC program follow the mandates established in the WIC Reauthorization Act of 1989. In 1996, \$21 per pregnant or breastfeeding WIC client is directed to the promotion of breastfeeding. OBS maintains a stock of pamphlets specifically targeted to these clients. These pamphlets address a number of concerns that a woman or her family may have such as the myth that she will have to avoid many foods, and that the father will not be as involved. In addition, mother and baby T-shirts are given out as incentives.

A program that has proven successful in many areas of the country is peer counseling.^{6,7} ADH has 12 peer counselors serving 21 counties (Fig. 1). They at-

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Figure 1.
Certified Lactation Consultants & Peer Counselors in Arkansas



tend maternity clinics and are available to talk to mothers regarding their infant feeding choices. A peer is often less threatening and provides a role model for these women. Many counselors are allowed to bring their infants to clinic.

Workshops teaching the promotion of breastfeeding have been held in all areas of the state. Local health units, physicians' offices and hospitals have participated. All members of the health care team whether nurse, nutritionist, receptionist or clerk are important in this effort. Future plans include the development of more workshops as well as training local leaders to continue these promotional efforts.

Education

Knowledgeable health care providers at every level are important to the promotion and success of breastfeeding. The Arkansas team was fortunate to be part of a field trial of a lactation curriculum developed by Wellstart International.⁸ Portions of that curriculum were used to develop a unique curriculum that is taught to first year pediatric, obstetrics\gynecology, and family medicine residents at UAMS Medical Center. Clinical experience is enhanced by a half-day visit to the Office of Breastfeeding Services. Medical students are also exposed to these lectures and may have the opportunity of seeing patients in the Lactation Clinic at Arkansas Children's Hospital. Nursing and nutrition students also rotate through OBS for clinical

experience and to learn of the services that it provides.

The Office of Breastfeeding Services has provided numerous workshops to health department clinics and hospitals around the state and will continue this as a major function. A quarterly newsletter updates health care providers on research related to breastfeeding, upcoming educational activities, and resources around the state. In February 1995, the Arkansas Department of Health and UAMS sponsored a regional seminar on breastfeeding. The three featured speakers were prestigious physicians and researchers from the U. S. and Canada. Future seminars are being planned with the hope of more participation by state physicians.

An intensive, week-long course is offered twice a year to prepare health care providers for certification as lactation consultants. To date, 65 individuals have completed the course. Of these, 13 have obtained certification through the International Board of Certified Lactation Consultants. Participants for this workshop are selected so most geographical areas of the state are represented.

Support of the breastfeeding family

The Office of Breastfeeding Services maintains a state-wide help line (1-800-445-6175) daily with evening and weekend coverage on a limited basis. (In Pulaski County, call 663-0892.) This service is available for families as well as health care providers. A clinic is held 2 days a week. Referrals come from many of the family practitioners, pediatricians and obstetricians in the central Arkansas area. Currently no fees are charged. Clinic visits usually involve complex breastfeeding problems, but prenatal patients with breast abnormalities or who simply desire more information are also seen.

A pump loan program is available for WIC clients. They may obtain a piston-type electric pump if they are trying to establish a milk supply for a sick or premature infant. A simple, portable electric pump is available for those clients returning to work or school. Local health units obtain manual pumps and other breastfeeding supplies through the OBS. A lending library of videos and books related to breastfeeding and parenting is also available.

As the public awareness of the importance of

breastfeeding increases, health care providers should take heed. Since 1990, the initiation of breastfeeding in Arkansas has increased from 37.6% to 44.8% in 1994.⁹ The overall breastfeeding rate for WIC clients is 9.22%, up from 3.44% in 1990.¹⁰ Increasing the incidence and duration of breastfeeding in Arkansas is a goal for all its citizens. The Arkansas Department of Health's Office of Breastfeeding Services is working with you to keep your hometown healthy by promoting and supporting breastfeeding as well as helping to educate health care providers to do the same.

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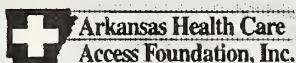
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SYNCOPE AND AORTIC VALVE STENOSIS: CLUES TO DIAGNOSIS AND PATHOPHYSIOLOGY

Angina pectoris, syncope, and congestive heart failure are the hallmark symptoms of aortic stenosis. Syncope due to aortic stenosis was first described in 1706 by Cowper in a patient who "complained of great faintness, and now and then pain about the heart..."¹ In this issue of CCU, we review the clues to diagnosis and pathophysiology of syncope due to aortic stenosis.

Patient Report

A 68 year-old male "passed out" while at rest in his fishing boat (Table 1, Complete Problem List).² This was his first episode of loss of consciousness. He was at rest without prior exertion. He was alone and there were no witnesses to the event. The incident happened suddenly, and he was unsure of the duration of the episode. While there was no loss of bowel or bladder control, he did sustain a small laceration to the left eyebrow. He did not drink alcohol or use illicit drugs.

He had a history of a "heart murmur" prior to his discharge from the military service in 1948. This murmur had not been evaluated. There was no history of prior myocardial infarction, rheumatic heart disease, or stroke.

The blood pressure was 133/85 mmHg. The amplitude of the peripheral pulses was diminished. The chest was normal. The first heart sound was normal, the second heart sound was diminished. There was a grade II/VI holosystolic murmur heard at the base of the heart which extended into the second heart sound. A grade I/VI diastolic murmur was heard at the left lower sternal border.

The electrocardiogram showed a sinus rhythm, rate

of 71 beats per minute, left atrial abnormality, and a left anterior fascicular block. Severe calcification and stenosis of the aortic valve were seen on the transthoracic echocardiography.

Cardiac catheterization showed a 100 mmHg peak-to-peak gradient across the aortic valve, normal left ventricular systolic function, and an angiographically significant stenosis in the right coronary artery. He underwent uneventful aortic valve replacement with a #23 St. Jude aortic valve (St. Jude Medical Inc., St. Paul, MN) and single reverse saphenous vein bypass graft was placed to the distal right coronary artery. Since open heart surgery, there have been several recurrent episodes of syncope, similar to the initial event. Ambulatory monitoring and an event recorder did not show an arrhythmia. An electrophysiological study revealed only inducible atrial flutter and a beta-adrenergic blocking agent was prescribed. A complete neurological evaluation was normal. The etiology of the syncopal episodes remains undefined. The patient continues to fish.

The Hemodynamics of Aortic Stenosis

Aortic stenosis decreases blood flow across the aortic valve during ventricular systole. Symptomatic aortic stenosis occurs when the valve size is severely reduced, generally at an orifice size of 1.0 cm^2 or less (normal size $> 2 \text{ cm}^2$) which is accompanied by an increase in left ventricular systolic pressure (Figure 1). The muscle of the left ventricle hypertrophies in response to the increase in systolic pressure to maintain normal ejection fraction and normal cardiac output. Ventricular hypertrophy without chamber dilatation results in diastolic dysfunction (decreased compliance and diastolic filling). Eventually, the contractile state becomes depressed and the left ventricle dilates. At this stage, the median survival of the patient is one year (Figure 2).

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Syncope: Clues To Diagnosis

The first question to ask the patient with syncope and aortic stenosis is: "What were you doing immediately prior to passing out?" A history of exertion is a critical clue to the etiology of the syncope. Non-exertional syncope may be related to the aortic valve or the other myriad causes of loss of consciousness. Calcium in the aortic orifice may embolize to the cerebral circulation and cause brain ischemia. Calcium may also extend into the conduction system causing transient atrioventricular block. A transient atrial arrhythmia may abruptly lead to a decrease in cardiac output due to loss of "atrial kick."

Four theories have been proposed to explain exertional-related syncope in patients with aortic stenosis: carotid sinus reflex hyperactivity, abrupt failure of the left ventricle, arrhythmia, and inappropriate reflex peripheral vasodilatation from ventricular baroreceptors.

Hyperactivity of the carotid sinus reflex. Marvin and Sullivan (Arthur G. Sullivan, MD hailed from Hot Springs, Arkansas) proposed that exertional-related syncope was due to hyperactivity of the carotid sinus reflex.³ It was later shown that carotid sinus massage did not produce syncope in any of 19 patients studied, discounting this theory.⁴

Abrupt failure of the left ventricle. Flamm and colleagues noted a sudden fall in cardiac output without an appropriate increase in the systemic vascular resistance in one patient undergoing erect exercise during cardiac catheterization.⁵ This hypothesis fell into disfavor with analysis of hemodynamic findings of 397 patients with aortic stenosis. In the group of 150 patients who had syncope, 59% had a left ventricular systolic pressures >200 mm Hg and 14% had a cardiac index < 2 L/min/m².⁶ These findings dispel the theory of left ventricular failure since syncope occurs at the height of left ventricular pressure.

Table 1 - Complete Problem List

I.	Syncope of uncertain etiology
II.	Valvular Heart Disease
Etiology:	Degeneration
Anatomy:	Echocardiogram: calcific aortic stenosis, left ventricular hypertrophy
Physiology:	Echocardiogram: calculated aortic valve area of 0.3 cm ² , moderate aortic insufficiency Cardiac catheterization: 100 mmHg peak-to-peak gradient
Objective:	Severely compromised
Subjective:	Severely compromised
III.	Coronary Artery Disease
Etiology:	Atherosclerosis
Anatomy:	Cardiac catheterization: 75% diameter stenosis of the mid-right coronary artery
Physiology:	Cardiac catheterization: normal left ventricular function
Objective:	Moderately compromised
Subjective:	Uncompromised
IV.	History of Hypercholesterolemia
V.	Prior Surgeries
	A. Hernia repair
	B. Hemorrhoidectomy

Arrhythmia. Arrhythmias have been proposed as a cause of exertional-related syncope in patients with aortic stenosis. Schwartz and colleagues studied nine patients with aortic stenosis and syncope over a period of six years.⁷ They observed a variety of arrhythmias including ventricular fibrillation and asystole. Importantly, they found that the arrhythmias developed after (not before) the onset of syncope. The arrhythmias were therefore a secondary effect and not the primary event leading to loss of consciousness.

Reflex peripheral vasodilatation. Reflex peripheral vasodilatation appears to be the most plausible cause for exertional-related syncope due to aortic stenosis.

Baroreceptors in the wall of the left ventricle are sensitive to pressure or stretch. In some patients with aortic stenosis, an increase in left ventricular pressure, as with exercise, initiates an inhibitory impulse which travels through the cardiac vagal afferent fibers to the medulla producing vasodilatation and bradycardia. The resulting hemodynamic collapse reduces cerebral perfusion and causes syncope.⁸

Grech and Ramsdale reported the hemodynamic findings of a patient with syncope and aortic stenosis.⁹ With exercise, there was an initial increase in blood pressure, heart rate, and systemic vascular resistance. With continued exertion, there was a progressive de-

cline in all of these hemodynamic parameters and the patient experienced loss of consciousness. Replacement of the aortic valve abolished the abnormal hemodynamic changes and "cured" the syncope.

Exertional-Related Syncope: Response To Treatment

Wilmhurst and colleagues recently reported the results of aortic valve replacement in patients with aortic stenosis who had syncope.¹⁰ There were no recurrent episodes of loss of consciousness in patients who had exertional-related syncope. However, more than 50% of patients with non-exertional syncope had recurrent episodes. This study supports the theory of inappropriate left ventricular baroreceptor responses in patients with exertional-related syncope.

Conclusions

There are a variety of causes of syncope in patients with aortic stenosis. A key finding is the relationship of the syncopal episode to exertion. One should not jump to the conclusion that syncope at rest in a patient with aortic stenosis is causally related. In these patients, causes other than aortic stenosis should be investigated. Patients with exertional-related syncope may have an abnormal baroreceptor activity and be symptomatically improved with aortic valve replacement.

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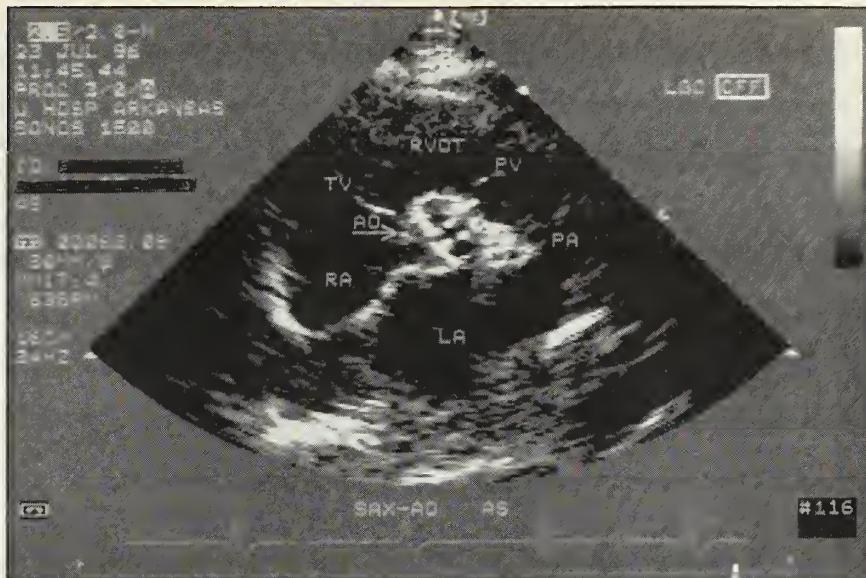


Figure 1. Parasternal short axis view of a severely calcified tri-leaflet aortic valve. The right and left atria are enlarged. (Echocardiogram courtesy of Nancy Patterson, BSN, RDCS.) - Abbreviations: AO = aortic valve, LA = left atrium, PA = pulmonary artery, PV = pulmonary vein, RA = right atrium, RVOT = right ventricular outflow tract, TV = tricuspid valve.

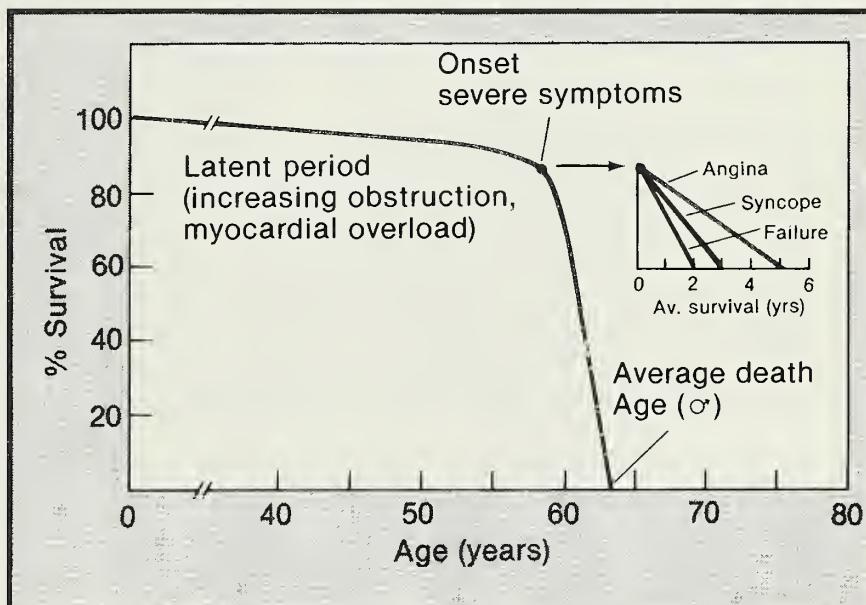


Figure 2. Hemodynamic changes and life expectancy of patients with aortic stenosis who have not undergone aortic valve replacement. (With permission of author and publisher, *Circulation* 1968;38:61.)

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State Health Watch

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Newly Reportable Diseases in Arkansas

On July 26, 1996, the Arkansas State Board of Health voted to add certain diseases to the current list of reportable diseases and conditions. These additions were recommended to the board by the Arkansas Department of Health Division of Epidemiology, and are in agreement with recommendations of the Centers for Disease Control and Prevention (CDC), and the Council of State and Territorial Epidemiologists.

The following diseases were added:

1. Drug-resistant Streptococcus pneumoniae. Pneumococci are a leading cause of otitis media, pneumonia and meningitis, especially among children, persons with debilitating medical conditions or immunodeficiencies, and the elderly. The prevalence of antibiotic resistance in the United States has increased dramatically over the past decade, with some rates of penicillin resistance reported over 40%.

2. Cryptosporidiosis. This emerging infectious diarrheal disease is caused by Cryptosporidium parvum, a coccidian parasite. The reservoir of this organism is the intestinal tract of human, cattle, and other domestic animals, and it is present in much of the surface waters in the United States. The infection is most severe in immunosuppressed persons, but outbreaks caused by contaminated community water systems have involved thousands of normal individuals.

3. Group A Streptococcal Invasive Disease. Necrotizing fasciitis is the most prominent manifestation of invasive disease caused by Group A Streptococci. The CDC has recommended that this condition be made reportable, as the number of cases occurring in the United States is unknown.

4. Hantavirus disease. As of May 3, 1996, 133 cases of hantavirus pulmonary syndrome have been reported in the United States. This is an acute zoonotic disease characterized by fever, myalgia and gastrointes-

tinal complaints followed by the abrupt onset of respiratory distress and hypotension. The fatality rate has been approximately 50%. Cases have been reported from 24 states, including Texas, Louisiana, and Florida. Although no human cases have been identified in Arkansas, one rodent from the Garland County area was found to have hantavirus antibodies.

5. Haemophilus influenzae Invasive Disease. Meningitis caused by H. influenzae is currently reportable, but epiglottitis, pneumonia, septic arthritis, cellulitis, empyema, and osteomyelitis are not. To be consistent with national reporting criteria, Arkansas reports should include all cases of invasive disease.

6. Infant Botulism. The CDC has recommended that infant botulism be reported separately from other botulism cases.

7. Hepatitis C/Non-A/Non-B. Hepatitis C has been increasingly recognized as a clinical entity with the advent of more specific tests. This is an important cause of acute and chronic hepatitis and serious sequelae. The CDC recommends that patients with a positive Hepatitis C serology and liver transaminases 2-1/2 times normal be reported as a case of C/Non-A/Non-B Hepatitis.

8. Vancomycin-resistant enterococci. Vancomycin-resistant enterococci (VRE) have emerged as important nosocomial pathogens in recent years. Both the numbers of VRE and the number of outbreaks caused by VRE reported to the CDC have increased. The epidemiology of VRE is not well understood, and increased surveillance and study is necessary to their control.

These and other reportable diseases should be reported by calling 1-800-482-8888. For a listing of all reportable diseases and conditions in Arkansas, call 661-2893 in Little Rock or 1-800-482-5400 ext. 2893 during normal business hours.

Reported Cases of Selected Reportable Diseases in Arkansas

Profile for June 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases June 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	21	90	78	67	153	187
Giardiasis	10	56	49	39	131	126
Shigellosis	4	39	61	81	176	193
Salmonellosis	39	151	109	98	332	534
Hepatitis A	27	263	186	43	663	253
Hepatitis B	4	45	33	26	83	60
HIB	0	0	5	2	6	5
Meningococcal Infections	0	23	24	33	39	55
Viral Meningitis	0	11	13	36	31	62
Lyme Disease	5	17	7	10	11	15
Rocky Mountain Spotted Fever	3	5	11	7	31	18
Tularemia	3	10	16	16	22	23
Measles	0	0	2	1	2	5
Mumps	0	0	4	4	5	7
Rubella	0	0	0	0	0	0
Gonorrhea	***	***	2532	3749	5437	7078
Syphilis	***	***	826	725	1017	1096
Legionellosis	0	0	5	8	5	16
Pertussis	0	3	25	19	59	33
Tuberculosis	18	108	106	119	271	264

*** Unavailable at date of submission



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Arkansas HIV/AIDS Report

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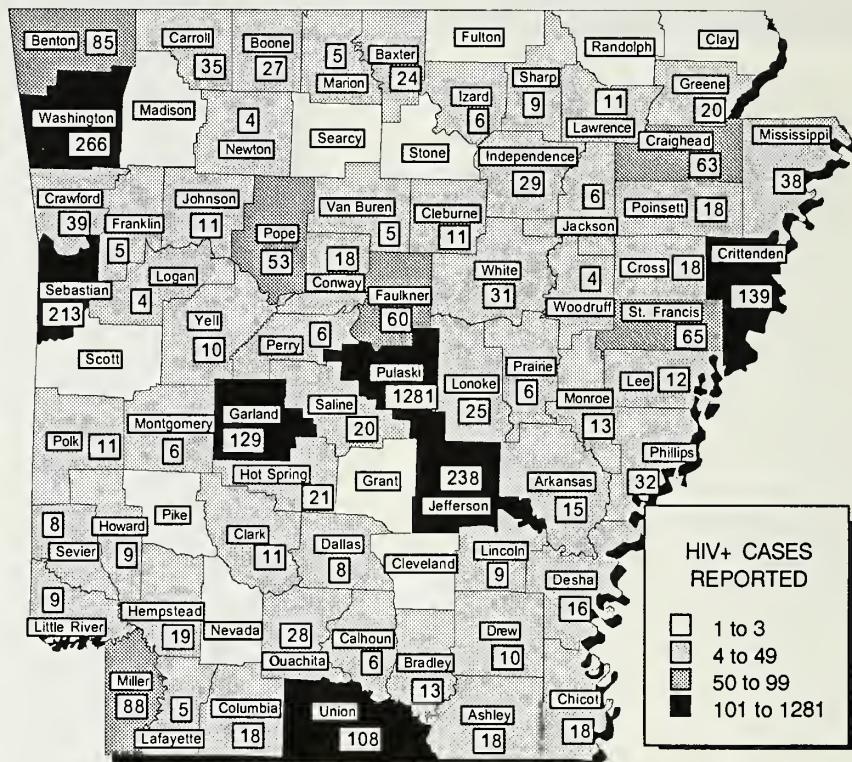
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



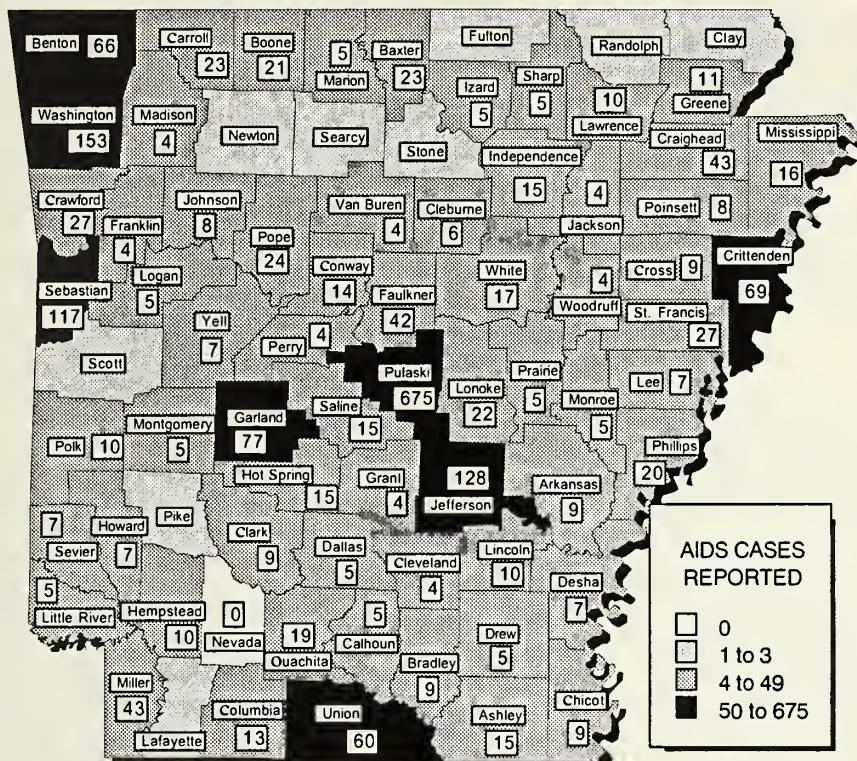
County of residence at the time of test for the 3,631 Arkansans reported to be HIV+ (7/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S	Male	100	215	248	413	400	392	352	367	338	172	2,997	83
E	Female	8	26	37	68	85	81	94	90	91	54	634	17
A G E	Under 5	1	1	2	8	13	6	3	7	2	1	44	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	17	135	4
	20-24	12	40	52	71	44	49	64	60	47	21	460	13
	25-29	21	70	71	112	105	107	111	85	78	41	801	22
	30-34	25	50	64	116	120	111	91	102	101	44	824	23
	35-39	19	36	40	80	88	68	77	69	81	45	603	17
	40-44	16	17	17	43	50	41	47	50	46	24	351	10
	45-49	6	8	18	13	20	26	18	27	24	12	172	5
	50-54	2	1	5	8	14	14	10	12	17	10	93	3
	55-59	1	3	4	6	3	13	6	7	5	6	54	1
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	4	37	1
R	White	87	170	174	328	298	293	278	259	260	112	2,259	62
A	Black	21	69	108	151	184	173	163	184	159	101	1,313	36
C	Hispanic	0	1	3	1	3	4	1	7	3	2	25	1
E	Other/Unknown	0	1	0	1	0	3	4	7	7	11	34	1
R I S K	Male/Male Sex	65	138	143	243	247	261	242	229	161	63	1,792	49
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	50	11	533	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	25	9	245	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	94	59	23	523	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	0	19	32	41	22	11	7	28	127	120	407	11
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	226	3,631	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,631 Arkansans reported to be HIV+, 2,057 have been diagnosed with AIDS. (7/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	130	1,783	87
	Female	5	6	10	20	25	35	64	42	36	31	274	13
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	1	7	0
	13-19	0	0	0	4	3	2	4	3	1	2	19	1
	20-24	7	5	11	11	14	14	31	22	11	9	135	7
	25-29	24	22	13	44	43	67	78	45	47	22	405	20
	30-34	20	21	21	47	42	73	98	81	75	42	520	25
	35-39	19	15	20	31	38	55	80	52	49	36	395	19
	40-44	10	7	4	21	35	28	49	39	35	25	253	12
	45-49	5	3	3	14	6	24	28	22	17	11	133	6
	50-54	1	1	2	5	6	7	10	12	15	3	62	3
	55-59	2	2	4	1	4	8	8	5	6	5	45	2
	60-64	1	1	1	1	1	2	6	10	5	1	29	1
	65 and older	1	4	0	4	2	2	3	3	9	4	32	2
R A C E	White	74	61	58	141	134	206	273	190	174	84	1,395	68
	Black	16	20	21	47	66	75	121	102	97	75	640	31
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	166	135	66	1,193	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	47	10	292	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	10	164	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	34	16	205	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	2	36	2
	Undetermined	0	2	1	3	1	2	2	8	25	56	100	5
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	161	2,057	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

ASHDOWN

Covert, George Krueger, Family Practice/Emergency Room. Medical Education, University of Autonoma, Guadalajara, Jalisco, Mexico, 1975. Internship, Muhlenburg Hospital, Plainfield, NJ, 1976. Residency, St. Barnabes Medical Center, 1977.

AUGUSTA

Moore, Jesse Daniel, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, Southwest Family Practice Residency, Texarkana, 1994/1996. Board pending.

BRADFORD

Knowles, Glen Carter, Family Practice. Medical Education, Oklahoma State University College of Medicine, Tulsa, 1993. Internship/Residency, AHEC-Pine Bluff, 1994/1996.

DANVILLE

Isely, William A. Medical Education, Universidad Autonoma de Guadalajara, Jalisco, Mexico, 1982. Internship/Residency, Lutheran Medical Center, St. Louis, MO, 1984/1985.

EL DORADO

Moore, John H., General Surgery. Medical Education, UAMS, 1964. Internship, Grady Memorial Hospital, 1965. Residency, LSU-Charity Hospital, New Orleans, 1969. Board certified.

EUDORA

Doshi, Sangeeta H., Medical Education, M.g.m. Medical College, India, 1988. Internship M.y. Hospital, India, 1989. Residency, Mercy Hospital, Toledo, Ohio, 1994.

FAYETTEVILLE

Allen, Bernagie Eual, Family Practice. Medical Education, UAMS, 1992. Internship, AHEC-Pine Bluff, 1993. Residency, AHEC-NW, Fayetteville, 1995.

Garibaldi, Byron Thomas, Family Practice. Medical Education, University of Texas Medical Branch, Galveston, 1993. Internship/Residency, St. Joseph Family Practice Residency Program, 1994/1996.

FORREST CITY

Hashmi, Shakeb, Internal Medicine. Medical Education, Aga Khan University, Pakistan, 1992. Internship/Residency, University of Tennessee, Memphis, 1994/1996.

FT. SMITH

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Handley, David Lynn, Radiology. Medical Education, University of Texas Medical Branch, Galveston, 1992. Residency, University of Texas Southwestern, Dallas, 1996. Board certified.

McMicheal, Wanda V., Family Practice. Medical Education, University of Oklahoma College of Medicine, Oklahoma City, 1993. Internship/Residency, St. Joseph's, Wichita, Kansas, 1994/1996.

HOT SPRINGS

Hill, Harold Randall, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC-Pine Bluff, 1994/1996.

Waters, Samuel Gregory, Emergency Medicine. Medical Education, UAMS, 1991. Internship/Residency, UAMS. Board pending.

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Pryor, Shapard Hanner, Jr., Anesthesiology. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1993/1996.

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LITTLE ROCK

Angtuaco, Sylvia Santos-Ocampo, Pediatric Cardiology. Medical Education, Brown University, Providence, Rhode Island, 1989. Internship/Residency, Yale-New Haven Hospital, 1990/1992. Board certified.

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PINE BLUFF

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SEARCY

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SILOAM SPRINGS

Allard, Mark Michael, Orthopedic Surgery. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1996.

VAN BUREN

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OUT OF STATE

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RESIDENTS

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Hartman, Arthur Richard. Medical Education, University of South Florida College of Medicine, Tampa, 1996.

Huey, Sandra Sheiron, Family Medicine. Medical Education, University of Health Sciences College of Osteopathic Medicine, Kansas City, MO, 1996. Internship/Residency, AHEC-Pine Bluff.

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Ledbetter, Johnny Roger, Jr., Pediatrics. Medical Education, UAMS, 1995, Internship/Residency, UAMS-Arkansas Children's Hospital.

Malone, Mark Steven. Medical Education, Texas A&M University College of Medicine, College Station, TX, 1993. Internship, University of Pittsburgh. Residency, AHEC-South Arkansas.

Marshall, Marilyn Dianne, Family Medicine. Medical Education, University of Michigan Medical School, Ann Arbor, 1996. Internship/Residency, AHEC-South Arkansas.

McLeod, Michael Reilly. Medical Education, University of Texas Southwestern Medical School, Dallas, 1996.

Mohan, Kumaran K, Family Medicine. Medical Education, Calicut Medical College, 1979. Internship, Calicut Medical College. Residency, El Dorado.

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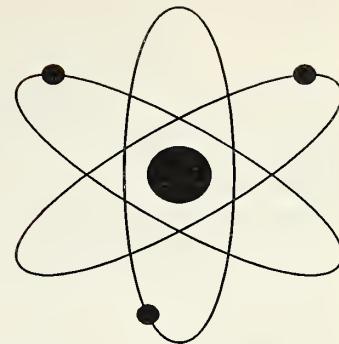
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Kenneth Morgan Sauer
Keith Oliver Schluterman
Caroline Clements Smith
David Lucas Smith
Elizabeth Anne Storm
Robert Thomas VanHook
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Radiological Case of the Month

David Harshfield, M.D., Editor

Authors

N. Karol Anderson
David Harshfield, M.D.



HISTORY:

Case 1: 45-year-old white female presents with a palpable, non-fixed mass of the left breast. Mammography was inconclusive due to marked density of the fibroglandular tissue in this relatively young female. Breast ultrasound was performed as represented in Figure 1.

Case 2: 52-year-old black female presents with a palpable non-fixed mass of the right breast. Due to hormone supplementation and extreme density of the patient's mammograms, mammography was inconclusive. Breast ultrasound was performed and the findings are represented in Figure 2.

Case 3: 49-year-old white female presents with a palpable non-fixed mass of the right breast. Mammography was inconclusive secondary to the increased density of the patient's breast tissue. Breast ultrasound was performed in this patient and is represented in Figure 3.

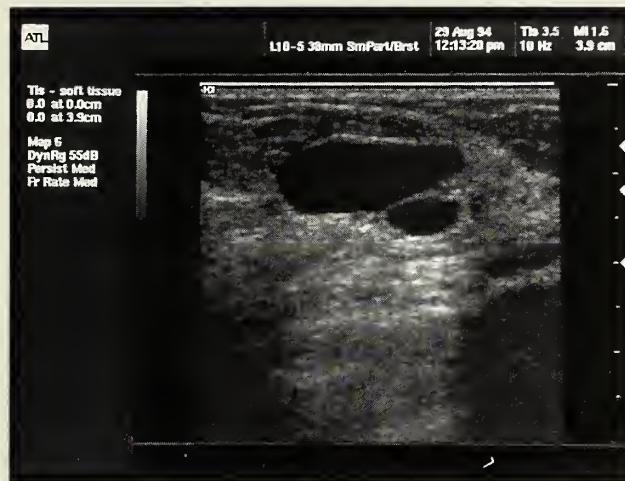


Figure 1



Figure 2

RADIOGRAPHIC FINDINGS:

Figure 1: There were two closely approximated lesions. The internal echo texture of both lesions was completely anechoic, and these lesions were well circumscribed and thinly encapsulated. These lesions demonstrated enhanced through transmission and thin edge shadows.

Figure 2: The lesion was well circumscribed and smoothly ellipsoid in shape with a horizontal diameter greater than the AP dimension (wider than tall). There was a thin, echogenic pseudocapsule around this nodule suggesting a pushing, non-invasive leading edge (not infiltrative). Not only was the inner border of the capsule well circumscribed, but the outer border was also well defined.

Figure 3: The breast ultrasound examination revealed a markedly hypoechoic mass with irregular, angular margins. The lesion appeared to be "taller-than-wide," and there was a spiculated capsule with evidence of duct extension (as indicated by the white arrow). Marked shadowing was also noted.



Figure 3

Benign Simple Cyst, Benign Fibroadenoma & Malignant Carcinoma of the Breast

DIAGNOSIS:

- Case 1: Benign simple cyst.
- Case 2: Benign fibroadenoma.
- Case 3: Malignant carcinoma of the breast.

DISCUSSION:

Previously the role of ultrasound in breast examination has been limited to differentiation of simple, benign cysts from other breast disease. Recent improvement in ultrasound equipment and technology now make it possible to diagnosis solid masses as being benign or malignant with an extremely high degree of certainty, thereby eliminating a number of unnecessary biopsies for benign, solid breast masses. One such ultrasound system is the Advanced Technology Laboratories (ATL) High Definition Imaging (HDI) digital ultrasound system which was the first system to receive FDA approval of its pre-market approval (PMA) for imaging of solid breast tumors. The PMA application was based on findings of an international multi-center study that involved more than 1000 women with breast lesions. The participants underwent imaging with the ATL HDI digital ultrasound system. The examination took approximately 15 minutes and was performed following diagnostic mammograms which revealed suspicious breast lesions. Only solid lesions were included in the study; simple cysts found on conventional ultrasound were excluded. Based on the results of the mammogram and/or clinical examination, the lesion was assigned a level of suspicion score of 1 to 5 as follows: 1=benign; 2=probably benign; 3=indeterminate; 4=probably malignant, and 5=malignant.

The mass was also scored under a similar classification system based on ultrasound findings obtained from the HDI examination. A similar grading system was employed pertaining to the color doppler signals obtained from the solid breast masses. Ultimately, a "physician's call" of benign or malignant was made based on all of the information obtained from the clinical, mammographic and ultrasound findings. All lesions underwent biopsy and pathologic confirmation. The receiver-operator characteristics (ROC) analysis showed a statistically significant improvement when ultrasound was used following mammography compared to mammography alone in discriminating solid breast masses.

The following are selected excerpts from breast ultrasound syllabi and lectures recently presented by Dr. David Harshfield.

Most physicians realize the importance of early diagnosis of breast carcinoma. With the exception of radiologists, most physicians are unaware of the enormous limitations of mammography in accurately diagnosing breast pathology. Mammography has a false positive rate of 80 to 90%. In other words, out of every 100 patients who undergo biopsy of mammographically suspicious lesions, only 10 to 20 have malignancy. The other 80 to 90 patients have benign disease which would not require biopsy if better diagnostic tests were available. Ultrasound, although not appropriate as a screening tool, is becoming an excellent diagnostic test to better classify abnormal clinical and mammographic findings. Previously the role of ultrasound was limited to differentiating cysts from solid masses, with all solid or indeterminate masses requiring biopsy. ATL is the first in the industry to pursue ultrasound as a modality capable of differentiating solid breast masses. The recent preliminary multi-center study by ATL has shown that 40% of biopsies can be eliminated by improved ultrasound techniques. Even as ultrasound is enhancing the specificity in diagnosing breast abnormalities, advances in breast MRI are also promising.

1.) BUS General Goals

Mammography can be used for diagnosis or breast cancer screening. Breast ultrasound (BUS), on the other hand, is used strictly for diagnosis. The general goal of BUS is to arrive at a more specific diagnosis. If the more specific diagnosis is that of a typically benign lesion such as a simple cyst, BUS can **prevent unnecessary biopsy** and can also **obviate the need for follow-up diagnostic mammography**. If the more specific diagnosis is that of a malignant or nonspecific lesion, or of a symptomatic benign lesion, BUS is superb at **guiding needle procedures** including: needle localization for excisional biopsy, cyst aspiration, and core-needle biopsy. In the process of identifying appropriate mammographic and/or clinical indications for BUS and closely correlating BUS findings with clinical and mammographic findings, the breast sonographer typically **improves mammographic and clinical skills**. BUS also occasionally demonstrates a malignancy which is neither clinically nor mammographically apparent, but finding cancers is only a minor goal of BUS.

2.) Indications

Since BUS is a diagnostic rather than a screening procedure, it is **targeted** to a specific **clinical or focal mammographic finding** in the vast majority of patients.

BUS should be performed on **palpable lumps** when the mammogram in the area of the lump is negative or nonspecific. Furthermore, there should be water density tissue by mammography in the area of the palpable lump for ultrasound to add any useful information. If the entire breast or the entire quadrant in which the palpable abnormality lies contains only fatty tissue on mammograms, the mammogram will not miss any significant lesions and the BUS will not find any significant lesions which the mammogram has missed. If there is a mammographically visible and obviously malignant lesion in the area of the palpable abnormality, it is unlikely that BUS will add enough useful information to alter treatment.

BUS should be also be performed when there is a **focal mammographic nodule or mass which has benign or nonspecific characteristics**. **Mammography cannot distinguish between cyst and solid**, even for well-circumscribed lesions. If the mammographic lesion is obviously malignant, BUS will generally not add enough additional information to alter treatment. In such cases, however, BUS might still be used to guide needle-localization or needle-biopsy because it is generally quicker than mammographic guidance.

The vast majority of BUS examinations will be performed to evaluate focal palpable or mammographic abnormalities. Such examinations are usually limited to the general area of the clinical or mammographic abnormality. There are, however, occasional circumstances in which whole-breast examinations may be performed. These include: 1) breast secretions; 2) suspected leaks from silicone implants; 3) follow-up of multiple known mammographic and/or sonographic lesions; 4) patients who refuse mammography (usually because of radiation phobia); 5) strong family history of breast cancer and radiographically dense breast tissue; 6) metastases thought to be of breast origin, but negative clinical exam and mammography, and 7) to exclude multicentric malignancy when lumpectomy and radiation are an option for a known clinically or mammographically evident malignancy.

Contrast enhanced MRI is being investigated for applications #2 - #7 and may eventually replace BUS for these "whole-breast" applications.

3.) BUS Correlation with Clinical Findings and Mammograms

When the main indication for BUS is a palpable lump, it is imperative that the lump be palpated while being scanned. Breast biopsy can be avoided if it can be shown that the lump is due to a simple cyst or due to fibroglandular tissue. Both can cause palpable lumps or ridges. Merely showing a simple cyst or echogenic fibroglandular tissue in the general vicinity of a palpable lump, however, is inadequate proof that it is the cause of the lump. Simple cysts are so common in some age groups that they are virtually a variant of normal. Fibroglandular tissue, of course, is present in at least some parts of the breasts in the vast majority of all women -- especially those who are within the reproductive years and even in postmenopausal women who are undergoing hormonal replacement therapy. Both simple cysts and fibroglandular elements are frequently incidental findings and not the cause of the palpable abnormality. Only by palpating a cyst or focal collection of fibroglandular tissue while we are demonstrating it sonographically can we be sure that it is the cause of the palpable abnormality.

When the main indication for BUS is a mammographic nodule, mass, or focal asymmetrical density, it is essential that size, shape, location, and density of surrounding tissues are the same on mammograms and ultrasound. As for the palpable lumps, merely showing a simple cyst or focal collection of fibroglandular tissues does not prove that either is the cause of the mammographic abnormality. Either could easily be an incidental finding, especially if the breasts are mammographically dense or if there are multiple mammographic densities. Only if the size, shape, location, and density of surrounding tissues are similar on mammography and BUS can we be sure that a simple cyst or fibrous pseudotumor is the cause of the mammographic density.

When correlating BUS with mammography, one should compare the CC view of the mammogram with the transverse view on BUS. The shape of a mammographic lesion will be easier to reproduce sonographically if the scan plane is identical to the projection plane of the mammogram. The transverse BUS sonotomographic plane very consistently reproduces the projection of the CC mammogram. The MLO view of the mammogram may vary from 30° to 60°. It is difficult to reproduce the exact degree of obliquity on the BUS that was used on the MLO view of the mammogram.

4.) BUS Equipment

BUS equipment must have excellent spatial and contrast resolution. Both axial and lateral components of spatial resolution must be exquisite. Broad-band, high-frequency linear electronically-focused probes currently offer the best combination of spatial and contrast resolution for BUS.

Excellent axial resolution is important in identifying normal structures which course parallel to the skin

(such as mammary ducts and the fascial planes surrounding the mammary zone) and in identifying the characteristics of the capsules around cysts and solid nodules. Equipment with adequate axial resolution should allow identification of normal ducts in the periareolar regions in most breasts. If you never see these, the equipment you are using has inadequate axial resolution. The axial component of spatial resolution is dependent primarily upon nominal probe frequency, bandwidth, and burst length. Axial resolution is proportional to probe frequency. The higher the probe frequency, the shorter the wavelength. The shorter the wavelength, the better the axial resolution. The relationship between probe frequency and axial resolution holds for any given burst length. The longer the burst length, the more wavelengths are sent out in each pulse. If burst length is increased, axial resolution is decreased. Axial resolution improves with wider bandwidths. The best axial resolution is achieved with a high-frequency, broad bandwidth probe when the burst length is short.

Lateral resolution at all depths within the breast is important in order to minimize volume averaging of surrounding normal breast tissues with pathological lesions. Such volume averaging may cause mischaracterization of small cystic lesions as solid and may even cause small solid lesions to be indistinguishable from surrounding tissues. Lateral spatial resolution is also a complex subject. For linear probes there are two planes which determine lateral resolution; the long axis and the short (elevation plane focus).

The long axis of the linear probe can be electronically focused. Continuous electronic focusing may be done on receive or transmit phases. The degree of electronic focusing upon receive depends upon many factors, including: 1) number of channels, 2) aperture size, 3) number of elements, 4) number of scan lines, and 5) apodization. In general, lateral resolution improves with increasing number of channels, increasing aperture size, increasing number of elements in the transducer, and increasing scan lines. Some probes with fewer elements compensate by interpolating scan lines between elements (half-line scanning). In general, most manufacturers do an excellent job of electronically focusing upon receive. Electronic focusing on transmit depends on many of the same factors as receive focusing but has been more limited. It depends upon the number of transmit zones. In general, the more transmit zones, the better the lateral resolution. Increasing the number of transmit zones, however, decreases frame rate. In general, many transmit focal zones in the first 2 cm are very beneficial in BUS. Some high frequency probes, however, concentrate too many transmit zones below 1.5 cm. for optimal breast imaging. One manufacturer has recently implemented continuous electronic focusing upon transmit as well as receive. The optimal BUS probe has a large aperture, high scan line density, continuous electronic focusing on receive, and either numerous very superficially located transmit zones or continuous electronic focusing upon transmit.

5.) BUS Technique

The patient is positioned in a supine position with the ipsilateral hand behind the head. The patient is rolled into a contralateral posterior oblique position to a degree which minimizes breast thickness in the quadrant being scanned. Lesions in the medial quadrants may be best scanned in straight supine position. Lesions in the lateral quadrants require the greatest degree of contralateral posterior obliquity. Generally, greater degrees of obliquity are required for larger breasts.

This positioning accomplishes two things: 1) **The breast is thinned** to the greatest extent possible, so that the high frequency, near-field probes used adequately penetrate to the chest wall and so that the focusing characteristics of the probe are optimized; and 2) **The tissue planes** of the breast, which are conical in the upright and prone positions, are **pulled into a plane which is parallel to the skin line**. This minimizes critical angle shadowing and improves penetration and prevents degradation of focusing characteristics. There is one additional advantage to this positioning. It is very similar to the position the patient will be in during open excisional biopsies, especially important when using ultrasound to guide needle localizations.

Solid lesions are scanned in radial and antiradial planes rather than in routine longitudinal and transverse planes. The reasons for this will be discussed later. Radial plane images are abbreviated "RAD" and antiradial planes are abbreviated "AR."

6.) Simple Cysts

Breast cysts can be classified as simple or complex. Simple cysts are completely anechoic, well-circumscribed and thinly-encapsulated. They show enhanced through transmission and thin edge shadows. Only if a cyst meets all of these criteria can it be called a simple cyst. If strict criteria for a simple cyst are met, however, there is virtually no chance of malignancy. It is unnecessary to biopsy, aspirate, or even follow-up such a cyst. Enhanced through transmission is the most variable and difficult to demonstrate of these simple cystic characteristics. It can be especially difficult to demonstrate enhanced through-transmission for small and/or deep cysts. In many instances a special effort to scan the cyst exactly perpendicular to the anterior wall is necessary to demonstrate this enhanced through transmission. For deep cysts which lie adjacent the chest wall, coronal scanning planes can be helpful. Since en-

hanced through-transmission is an artifact of the time-gain curve (TGC), using a steeper TGC can sometimes make it more obvious.

Simple cysts which are under pressure can be palpated and are roughly spherical in shape. Many cysts are not under pressure at the time of BUS and cannot be palpated. They may appear flattened and ovoid in the AP dimension during scanning. These cysts will have the same maximum diameter on ultrasound as they do on mammograms (when mammographic magnification is taken into account), but will generally have a smaller mean diameter on BUS than they do on mammograms because they are only being compressed in one plane during the BUS, but are being compressed in two planes during two-view mammograms.

If the indication for BUS is a palpable lump, the cyst should be palpated while it is being scanned to make sure that it is the cause of the palpable lump. If the indication for BUS is a mammographic nodule or mass, the size, shape, location, and density of surrounding tissues should be the same for BUS and mammography.

7.) Complex Cysts

Complex breast cysts represent a very heterogeneous group of entities. The term "complex" is not as informative or helpful in BUS as it is for sonography of the kidneys. There is a spectrum of complex cysts, some of which have implications little different from simple cysts, and others which carry a significantly higher risk of malignancy than some solid nodules. We continue to use the term "complex cyst" in reporting BUS results, but always modify the term with a description of the characteristics which require such a classification. Complex cystic types include: 1) mobile diffuse, low-level internal echoes; 2) non-mobile diffuse, low-level internal echoes; 3) fluid-debris level; 4) thin internal septations; 5) thick internal septations; 6) sponge-like cluster of cysts; 7) concave thick wall and 8) convex thick wall (mural nodule).

8.) Solid Nodules

It has generally been accepted that B-mode ultrasound cannot distinguish benign from solid breast nodules with enough accuracy to avoid biopsy. In the past, therefore, when BUS has demonstrated a solid nodule, biopsy has always been recommended. Because of this perceived inability of the B-mode image to differentiate benign solid from malignant, other sonographic findings have been investigated. Doppler has been used to try to demonstrate malignant neovascularity in the hope that lack of demonstrable neovascularity would obviate the need for biopsy. Unfortunately, the sensitivity of Doppler has also been too low to prevent biopsy.

We have recently reassessed the ability of the B-mode BUS image to characterize solid nodules. Each solid nodule was evaluated for several sonographic criteria. We derived criteria from a combination of literature reports and our own retrospective nonpublished joint study with Swedish Medical Institute in Denver, Colorado, comprised of 400 solid nodules which had undergone excisional biopsy. Based on the retrospective study we selected individual sonographic criteria which had a less than a 5% chance of being associated with malignancy as probably benign. Individual findings which had between 5% and 49% as being indeterminate and findings which had a 50% or greater association with malignancy were classified as probably malignant.

9.) Malignant Characteristics in Solid Nodules

For malignant characteristics the sensitivities, positive predictive values and relative risks are listed in the following table. The pre-test probability or prevalence of disease was 18.1%. The adjusted risk is the positive predictive value divided by the prevalence.

CHARACTERISTIC	SENSITIVITY	PPV	RELATIVE RISK
Spiculated capsule	38.9	94.9	5.24
Taller-than-wide	40.0	88.1	4.87
Branch pattern	27.4	76.5	4.23
Angular margins	86.3	74.5	4.12
Markedly hypoechoic	69.5	66.0	3.65
Shadowing	50.5	65.8	3.64
Duct Extension	23.2	64.7	3.57
Calcification	27.8	62.5	3.45
Microlobulation	73.7	53.0	2.93

Many of the sonographic findings of malignancy (spiculation, angular margins, calcification, microlobulation, duct extension) are similar to the mammographic findings and require no further explanation.

10.) Benign Characteristics in Solid Nodules

For benign characteristics the specificity, negative predictive values, and relative risks are listed in the following table. The prevalence of cancer in this population of solid nodules is 18.1%.

CHARACTERISTIC	SPECIFICITY	SENSITIVITY	NPV	RELATIVE RISK
Hyperechoic	5.6%	100.0%	100.0%	0.000
Ellipsoid shape	54.3%	98.9%	99.6%	0.002
3 or fewer lobulations	21.1%	98.9%	98.9%	0.060
thin echogenic capsule	81.7%	94.7%	98.6%	0.080

Purely hyperechoic structures represent normal fibroglandular elements within the breast. Although this is probably the commonest cause of palpable abnormalities, is also a common cause of asymmetric mammographic densities, and is an occasional cause of discrete mammographic nodules, only a small percentage of these are biopsied (accounting for the low 5.6% specificity). The BUS is usually interpreted as normal. Nevertheless, some are biopsied at the surgeon's or patient's insistence. We have never seen a purely hyperechoic breast cancer, although many cancers have thick echogenic rims which represent fibroelastotic host reaction to the tumor. In this series all of the small number of "fibrous pseudotumors" were benign. (100% NPV)

The classical fibroadenoma is well-circumscribed and perfectly smoothly ellipsoid in shape with a horizontal diameter greater than the AP dimension (wider than tall). Most small fibroadenomas under 1.0 cm in maximum diameter are in this category. Unfortunately, as fibroadenomata enlarge, they have a tendency to become multilobulated and more irregular in shape. Nevertheless, over 50% of the benign nodules in this series were ellipsoid in shape. When a well-circumscribed ellipsoid nodule is demonstrated, there is less than a 1% chance of malignancy (NPV = 98.9%).

Some benign solid nodules have 2 or 3 smooth, gentle lobulations, and similar to mammographic findings, such nodules have a very high likelihood of being benign. Nodules which have more than 3 lobulations frequently merely represent larger fibroadenomata, but the odds of malignancy shift just enough that nodules with more than 3 lobulations must be considered indeterminate (NPV only 92.3%). These nodules, like the ellipsoid nodules described above must be well-circumscribed and wider in the transverse dimensions than in the AP dimension.

A thin echogenic pseudocapsule around a solid nodule suggests a pushing, non-invasive leading edge, a non-malignant finding. 81.7% of the biopsy-proven benign solid nodules had a thin echogenic capsule. Only 1.4% of malignant nodules had a thin echogenic capsule. Previous studies have evaluated well-circumscribed margins of the nodule as a benign characteristic and found it insufficiently accurate to avoid biopsy. We believe that a thin echogenic capsule represents a more specific form of well-circumscribed. The well-circumscribed outer margin of the nodule represents the well-circumscribed inner border of the pseudocapsule. With a thin echogenic capsule, however, not only is the inner border of the capsule well-circumscribed, but the outer border is also well circumscribed. This gives us more useful information about the aggressiveness of the nodule.

Because previous studies and even our own retrospective study found that well circumscribed nodules were occasionally malignant, we chose to require a combination of shape plus a thin echogenic capsule in order to classify a nodule as probably benign (unless it was purely hyperechoic). Combinations of findings which could lead to probably benign classification were, therefore: 1) a well-circumscribed purely hyperechoic structure; 2) a thinly encapsulated perfectly ellipsoid solid nodule, and 3) a thinly encapsulated, well-circumscribed solid nodule with 3 or fewer smooth, gentle lobulations.

Using this combination of findings we were able to classify over half of all the nodules we evaluated and 70% of all solid nodules as probably benign. The results of the overall nodule classification are as follows:

CLASSIFICATION	NUMBER (%) OF NODULES	NUMBER (%) OF MALIGNANT NODULES
Probably benign	302 (57.4%)	1 (0.3%)
Indeterminate	120 (22.8%)	15 (12.5%)
Probably malignant	104 (19.8%)	79 (76.0%)

In the entire group of 526 solid nodules 95 (18.1%) were malignant. This represents the prevalence of malignancy in this group of solid nodules. Only 0.3% of solid nodules classified as probably benign were malignant. The negative predictive value in this group was 99.7%. The adjusted risk of a probably benign classification is a dramati-

cally reduced .017. Of nodules classified as indeterminate 12.5% were malignant. Of lesions classified as probably malignant 76.0% were malignant. Clearly the risk of malignancy in the probably malignant and indeterminate categories was high enough to justify continued biopsy of all solid nodules with such classifications. In the "probably benign" category, however, the negative-to-positive biopsy ratio of 301-to-one is so high that the need for biopsy of such nodules has to be strongly questioned if these results are reproducible by others.

We cannot recommend that others immediately base the decision to biopsy or not biopsy solid nodules strictly upon sonographic criteria, especially if they do not have high quality equipment optimized for near-field imaging. We have performed many BUS examinations over several years and have correlated most of these with pathology reports. Individual centers should probably initially only internally classify solid nodules without officially reporting these classifications until enough pathological correlations are available to assess the efficacy of sonography in characterizing solid nodules in their own hands. During this interval, additional experience, confidence, and a feel for the technical and equipment demands of BUS will be gained. It should be expected that initially a smaller percentage of nodules will be classifiable as probably benign than we are reporting. With time this percentage should increase. The algorithm we recommend should be strictly followed: First look for malignant findings. A single malignant finding requires a classification of probably malignant. Only if no malignant findings are found should benign characteristics be sought. If strict criteria for benignity are not found, the nodule must be classified as indeterminate. If there is even the slightest question about any characteristic, the nodule should at least be characterized as indeterminate and biopsy should be performed. Only when very strict criteria for benignity are met should a nodule be classified as probably benign.

In summary, BUS is useful not only in determining cystic vs. solid, but in further characterizing both cystic and solid nodules. BUS is better at distinguishing benign from malignant than has been previously reported. Aggressive diagnostic BUS with top-of-the-line equipment can prevent unnecessary biopsy when simple cysts, some types of complex cysts, and fibroglandular tissues are the cause of clinical or mammographic abnormalities. In the future BUS may be able to prevent unnecessary biopsy of some solid nodules.

Author: N. Karol Anderson is a Senior Medical Student at UAMS.

Author/Editor: David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.



Practice Update '96

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Saturday, October 19, 1996
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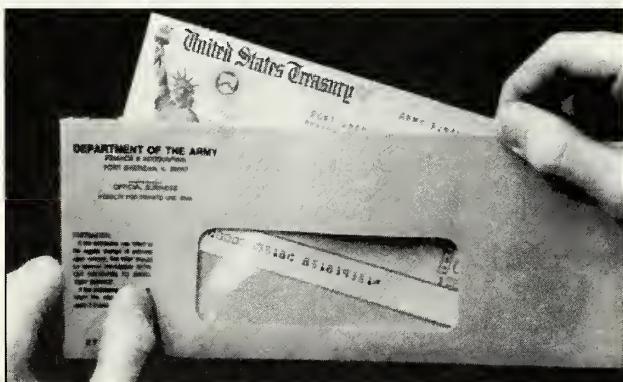
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In Memoriam

Joe C. Parker, M.D.

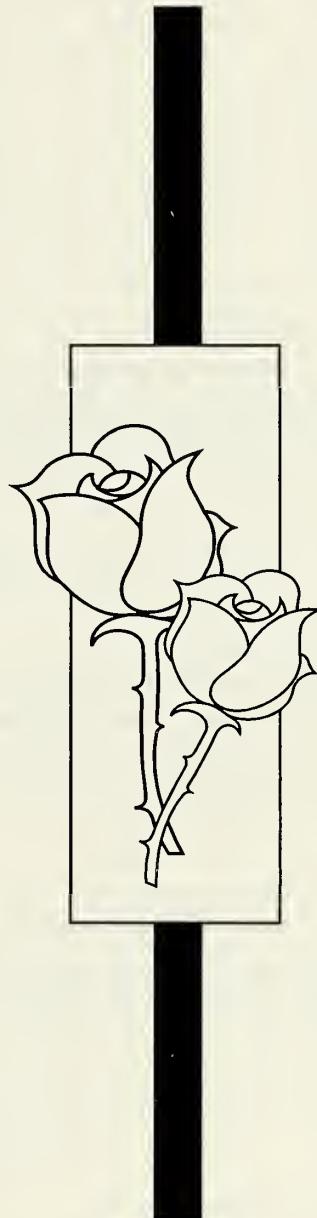
Dr. Joe C. Parker of Springdale, died Tuesday, July 30, 1996. He was 73. He is survived by his wife, Ival Parker; a son, Lane (Andy) Parker, Hollywood, Calif.; a daughter, Louise Newcomb, Little Rock; two brothers, Douglas W. Parker, Fort Smith, and Roy A. Parker, Pismo Beach, Calif., and a sister, Harriet Jane Parker, Mountain View.

Vance M. Strange, M.D.

Dr. Vance M. Strange of Stamps, died Friday, July 26, 1996. He was 87. He was preceded in death by a son, Bruce Strange, on June 15, 1996. He is survived by his wife, Lydia Strange; two sons, Vance M. Strange, Jr. and Stephen L. Strange, both of Conway; one daughter, Deborah Ward of Tucson, Arizona; nine grandchildren, and one great-granddaughter.

Walton R. Warford, M.D.

Dr. Walton R. Warford of North Little Rock, died Monday, July 15, 1996. He was 77. He is survived by his wife, Sue Watson Warford; a son, Walton R. Warford Jr., Fayetteville; a sister, Dr. Frances Elmer, Huntsville, Texas; two grandchildren, Walton Robert Warford III and Sarah Katherine Warford.



Things To Come

ARKANSAS LOCATION

October 4

Psychiatry for the Primary Care Physician. Clarion Hotel (Intersection of Hwy. 62 and Hwy. 71 bypass), Fayetteville, Arkansas. 12:00 noon to 5 p.m. Sponsored by Washington Regional Medical Center. This conference has been planned in conjunction with the Arkansas Razorback and Florida football game scheduled for Saturday, October 5. There are limited hotel rooms and football tickets available. For more information, call (501) 442-1823.

October 5 - 6

Lymphomas and Leukemia: Clinical Advances, Basic Science and Supportive Care Issues. J. Bennett Johnston Building, Tulane University Medical Center, New Orleans, LA. Sponsored by Tulane University Medical Center, Tulane Cancer Center, Center for Continuing Education and Nursing Resource Center. For more information, call (504) 588-5466 or 1-800-588-5300.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

October 10 - 11

22nd Annual Symposium on Obstetrics & Gynecology. Eric P. Newman Education Center, Washington University Medical Center, St. Louis, Missouri. Sponsored by the Department of Obstetrics and Gynecology and the Office of Continuing Medical Education at Washington University School of Medicine, St. Louis. For more information, call (800) 325-9862.

October 17 - 19

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

ARKANSAS LOCATION

October 25 and 26

Breast and Cervical Cancer Screening and Diagnosis. UAMS Campus, Little Rock. Interactive video site available statewide. CME hours available. For more information, call Dianne Crippen, R.N., Arkansas Department of Health, at (501) 661-2636.

November 1 - 3

New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 14 - 17

15th Annual Scientific Meeting - Pain and Disease: Causes, Consequences, and Solutions. Sheraton Washington Hotel, Washington, DC. Sponsored by the American Pain Society. For more information, call (847) 375-4715.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07

Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom

Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center

Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club

Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Cardiology Conference, dates vary, 7:00 p.m., locations vary

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

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Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center

Gynecologic Malignancies, 3rd Thursday every other month, 7:00 a.m., various area hospitals

Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.

Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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Author information should include titles, degrees, and any hospital or university appointments of the author(s). All scientific manuscripts must include an abstract of not more than 100 words. The abstract is a factual summary of the work and precedes the article. Manuscripts should be typewritten, double-spaced, and have generous margins. Subheads are strongly encouraged. The original and one copy should be submitted. Pages should be numbered. Manuscripts are not returned; however, original photographs or drawings will be returned upon request after publication. Manuscripts should be no longer than ten typewritten pages. Exceptions will be made only under most unusual circumstances.

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Volume 93 Number 5

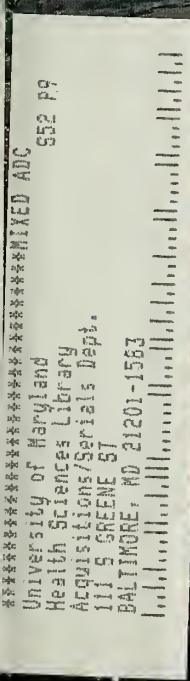
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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October 1996

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Cover photograph of Petit Jean State Park taken by Tim Schick of the Arkansas Department of Parks & Tourism.

How Much?

Samuel E. Landrum, M.D., F.A.C.S.*

It is usually cheaper to die than live. The ideal that living is expected to have substantial costs is part of our common cultural makeup. We rarely have considered how much should be spent individually or by shared pooling of resources for combating sickness or preserving health until recently. Just think of how often communities willingly have fund raisers for major treatments of one of their own or to get a new ambulance, fire truck or similar equipment for their mutual use. We may have known the cost or fee for individual operations or therapies, but consideration of the expense for prevention of diseases or lessening the morbidity of a disease has not been an emphasis before the current major changes of providing health care. The relationship of cost to usual benefit is being studied and reported frequently lately.

Colorectal cancer is the second most frequent cancer in this country and cure by resection is possible in the early stages of primary disease. Isolated metastases are best treated with resection yielding reported 25-33% survival for five years in good centers. Thus we commonly are conducting rather extensive searches for early signs of recurrence or a metastasis. Annual colonoscopy, blood counts, chemistry screens and more frequent CEA levels are now being challenged as too aggressive. Especially after two years without evidence of new disease, screening is recommended only at much less frequent intervals such as two, three or five years. The interval between detailed evaluations increases as the patient continues to survive without disease. This does not countermand the need to attend to clinical symptoms that may arise before the scheduled comprehensive examinations.

Detection of metastatic colorectal cancers was studied for 22,715 patients from the files of Veterans Affairs Hospitals during a recent seven-year period in which 12,150 developed metastatic disease. Data for the cost of surveillance were calculated and the years of added life gained by resecting metastatic lesions were contrasted with those of patients who did not have such treatment. The cost of surveillance for each year of life gained by treatment was found to be \$203,000.

This did not include special studies, transportation or other expenses pertaining to the case. The authors remark about this high cost, but they give interesting information about other commonly applied preventive strategies in medicine. For instance, the cost of each year of life gained by screening the elderly for cervical cancer is \$2900; propanolol for hypertension is \$11,000; bone marrow transplantation for leukemia is \$62,500; ICU interventions for hematologic malignancies is \$189,339; and ICU care for AIDS patients with *Pneumocystis carinii* pneumonia with respiratory failure is \$200,000 to \$300,000. The article also included that the cost per year of life gained by taking cholestyramine to control elevated cholesterol is \$117,400. Patients continually impress me about how anxious they are to know about their cholesterol, and apparently are willing to spend (a good bit of money) to reduce it.

There was a recent report from Europe to the effect that follow-up of patients treated for colorectal cancer did not yield but a two percent better overall survival than simply dismissing patients after resection to return if they had any trouble. One should look at such reports for the fine print before adhering to a less stringent protocol. However, it is demonstrable for breast cancer as well that getting every test that may be remotely abnormal every few months is not beneficial according to a multi-center study in Europe.

Fear of breast cancer is said to be the most horrifying one for a woman. I believe that screening mammograms annually are very important for women from forty to fifty years old. Data support this practice based on the more rapid growth of tumors in younger breasts and the better results of treatment of lesions detected smaller than one centimeter. The argument has been made that the cost is prohibitive to recommend annual mammography for the younger group of women because the incidence of breast cancer is higher beyond the age of fifty. The marginal cost per year of life saved by annual screening mammograms has been found to be \$25,600 for women aged 50-79, but it increases only to \$27,100 if annual screening is done for those 40-49 as well. Since it seems that breast cancer enlarges slower in post-menopausal patients,

* Dr. Landrum is affiliated with Holt-Krock Clinic in Fort Smith and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

the most cost-effective strategy was found to be for annual mammograms from 40-49 and mammograms every two years after fifty years old with a life time costs of \$20,200 per year of life saved. From a societal view, this latter strategy seems to be good to me. The younger women often still have family rearing concerns and the death of younger persons is viewed as more tragic than that of older ones.

Wouldn't it be great if government spending was reduced as medical spending seems to be - based on the benefit per cost? Regulations have only lately been considered in this light; it seemed that anything thought to be good was to be done regardless of cost. A "trihalomethane drinking-water standard" of 1979 incites a cost of \$200,000 estimated for each life saved. Contrasted are the 1990 restrictions on wood-preserving chemicals that impose an estimated cost of \$6.3 trillion per life saved. A study of 33 safety laws by Kip Viscusi of Duke University found only 13 saved lives at a cost of less than \$4,000,000 each which was the highest he thought reasonable. Transport regulators accept rules that save lives at \$3,000,000 each. Environmental rules are accepted at higher costs.

It is impossible to set a monetary value on a life intrinsically or probably extrinsically. Who would not spend all they could to recover a kidnapped child or secure a costly cure for a sick family member? However, we can alter patterns of practice without harming anyone's health by watching for more information along the lines mentioned above and seeing that our patients do get the best for their expenditures.

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1. Wade, Terence P., K.S. Virgo, Marcia J. Li, P.W. Callander, Walter E. Longo, and Frank E. Johnson. Outcomes after detection of metastatic carcinoma of colon and rectum. *JL of the Amer. Coll. Of Surg.* 1996, 182: 353-361.
2. Lindfors, Karen K. and C. John Rosenquist. The cost-effectiveness of mammographic screening strategies. *JAMA* 1995, 274: 881-884.
3. The Economist. July 26, 1996.
4. Tompkins, Ronald K. Preserving our integrity. *Arch. Surg.* 1996, 131: 801-806.

CORRECTION NOTICE:

Regarding the *Special Article* titled "Breastfeeding in Arkansas: Trends in the Northeast Region and Physician Self Assessment Quiz" in last month's issue - the sentence which reads "Of those with augmentation, **none** were able to breastfeed successfully" should read "Of those with augmentation, **nine** were able to breastfeed successfully." This sentence is in the fifth paragraph under the *Methods and Findings* heading of the article.

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Medicine in the News

Health Care Access Foundation

As of September 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,504 medically indigent persons, received 21,644 applications and enrolled 42,284 persons. This program has 1,737 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Zinc Lozenges for the Common Cold

Common colds are ubiquitous afflictions with few effective therapies. Zinc has been shown to have anti-viral effects and to induce interferon, and some prior studies have suggested it may be useful in the common cold. This randomized trial assessed whether zinc gluconate lozenges could reduce the duration of cold symptoms.

Researchers randomized 100 employees of the Cleveland Clinic who had cold symptoms for less than 24 hours to receive zinc lozenges (13.3 mg of zinc every two hours while awake) or matching placebo (containing calcium lactate pentahydrate) for as long as they had symptoms.

Patients taking zinc lozenges had a complete resolution of symptoms significantly sooner than placebo recipients (median, 4.4 vs. 7.6 days), and they had fewer days of coughing, headache, hoarseness, nasal congestion and drainage, and sore throat. However, the groups did not differ significantly in the resolution of fever, muscle ache, scratchy throat, or sneezing. Side effects such as nausea and a bad taste were significantly more common with zinc than placebo.

Comment: The duration of common cold symptoms can be reduced with zinc lozenges. Whether the potential adverse effects of the lozenges are worth the benefit is a decision best left to individual patients. - CD Mulrow

Mossad SB; et al. Zinc gluconate lozenges for treating the common cold; a randomized, placebo-controlled study. *Ann Intern Med* 1996 Jul 15; 125:81-8.

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Ipratropium Bromide for Runny Noses

Some typical symptoms of the common cold are rhinorrhea, nasal congestion, and sneezing, which are mediated in part by cholinergic mechanisms. This multicenter, randomized trial shows that intranasal ipratropium bromide, an anticholinergic agent, may

be a useful alleviator of these symptoms.

The study included 411 people who had rhinorrhea of at least moderate severity, nasal discharge of at least 1.5 grams over a one-hour period, and symptoms that had lasted less than 36 hours. Subjects were randomized to ipratropium bromide nasal spray (0.06%) given in two 42-ug sprays per nostril three to four times daily for four days, placebo nasal spray given in the same manner, or no treatment.

Ipratropium reduced subjective and objective symptoms of rhinorrhea compared with both the placebo and nontreatment groups. Sneezing, but not nasal congestion, was also reduced with ipratropium. Patients rated the overall effectiveness of treatment as more favorable with ipratropium than with placebo or no treatment, even though adverse effects such as blood-tinged mucus and nasal dryness were more common with ipratropium.

Comment: Intranasal ipratropium can be added to the armamentarium of common cold treatments. Its efficacy, cost, and adverse effects compared with other treatments (such as the zinc lozenges discussed above) are not known. - CD Mulrow

Hayden FG; et al. Effectiveness and safety of intranasal ipratropium bromide in common colds: a randomized, double-blind, placebo-controlled trial. *Ann Intern Med* 1996 Jul 15; 125:89-97.

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Interpretation of Mammography Requires More than X-ray Report

A two-part study of mammography proves the maxim that no test result should be interpreted in isolation of clinical data.

The researchers first studied 28,271 California women who had a first screening mammogram between 1985 and 1992, of whom 238 were found to have breast cancer during the next one to two years. Allowing 13 months for detection of breast cancer, the sensitivity of the screening mammogram was 90% overall, ranging from 77% among women aged 30 to 39 to more than 91% for women over 50. When analysis was restricted to invasive cancers (excluding ductal carcinoma in situ), sensitivities were 58%, 75%, 92%, 93%, and 87%, respectively, for women in their thirties, forties, fifties, sixties, and older. Sensitivity was only 69% among women under 50 with a family history of breast cancer, possibly because of faster-growing tumors. Notably, 59% of younger women who later presented

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with breast cancer did so within 13 months, versus only 39% of older women.

The second paper incorporates specificity data and offers guidelines for interpreting abnormal mammograms. Because the risk of breast cancer increases with age, the probability of breast cancer in a woman whose first mammogram is read as "additional evaluation needed" (as were 93% of abnormal mammograms in this study) is only about 1% for women in their thirties, increasing to 7% for those over age 70.

Comment: These analyses suggest that clinicians should neither be overly reassured by negative mammograms among young women, nor overly alarmed by marginally abnormal results, since the test's diagnostic performance is weak in this population. In older patients, however, both positive and negative test results are more likely to be accurate. - TH Lee

Kerlikowske K; et al. Effect of age, breast density, and family history on the sensitivity of first screening mammography. JAMA 1996 Jul 3; 276:33-8.

Kerlikowske K; et al. Likelihood ratios for modern screening mammography; risk of breast cancer based on age and mammographic interpretation. JAMA 1996 Jul 3; 276:39-43.

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Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board officer should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY:

August 14, 1996

*Meredith Chisholm Atkinson, RN 23138 (Siloam Springs) Suspension, 18 months; Civil penalty, \$6,500
*Evelyn Dinease Cleaves, LPN 32716 (Jonesboro) Sus-

pension, 2 years; Civil penalty, \$2,500

August 15, 1996

*Paula Ann Davis Marlar Davis, RN 14369 (Crossett) Probation, 2 years; Civil penalty, \$500

*Pamela Jean Strawn Andrews, LPN 12528 (Little Rock) Probation, 30 months; Civil penalty, \$1,000

August 16, 1996

*Michael Chavis, RN 26818 (Little Rock) REVOKED

*Morgyn Meleia Cloud Rector, LPN 24860 (Little Rock) Probation, 2 years; Civil penalty, \$250

CONSENT AGREEMENT

*Eva Marie Edmund, RN 43038 (Little Rock)

*Mary Carolyn Morse Wesson RN 43780/CRNA C-875 (DeQueen)

*Anne Michelle Bailey Hollister, RN 27555/RNP P-555 (Little Rock)

OFF PROBATION

*Audrey Orsby, LPN 20682 (Cherry Valley) 7/1/96

*Lynda Lou Young Osborn, LPN 16935 (Nashville) 8/1/96

VOLUNTARY SURRENDER

*Hollie Michelle Schmieder Heffington, LPN 32046 (White Hall) 6/30/96

*Joe Burley Rambo, II, LPN, 31411 (Wilmar) 8/6/96

*Lisa Anne Sullivan Hamilton Billiot Julian Hicks, RN 24568 (Little Rock/Ed Dorado) 8/15/96

LETTER OF REPRIMMAND

*Betty Lou Arnold, RN 9486 (Camden) 8/12/96

If you have employed the following nurses or have any knowledge of their whereabouts, please notify the board of nursing:

*Jacob Kent Davis, LPTN 1650

*Jackie Lynn McKenzie Sullinger, LPN 34137





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21	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
22	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
23	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
24	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
25	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
26	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
27	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
28	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
29	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
30	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
31	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
32	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
33	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
34	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
35	12.50	12.50	25.00	25.00	45.84	45.84	87.50	87.50
36	12.59	12.50	25.21	25.00	46.25	45.84	88.34	87.50
37	12.67	12.50	25.42	25.00	46.67	45.84	89.17	87.50
38	12.75	12.50	25.63	25.00	47.09	45.84	90.00	87.50
39	12.84	12.50	25.84	25.00	47.50	45.84	90.84	87.50
40	12.92	12.59	26.05	25.21	47.92	46.25	91.67	88.34
41	13.00	12.67	26.25	25.42	48.34	46.67	92.50	89.17
42	13.09	12.75	26.46	25.63	48.75	47.08	93.33	90.00

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44	13.25	12.92	26.88	26.05	49.59	47.92	95.00	91.67
45	13.34	13.00	27.09	26.25	50.00	48.34	95.84	92.50
46	13.75	13.09	28.13	26.46	52.09	48.75	100.00	93.34
47	14.59	13.17	30.21	26.67	56.25	49.17	108.34	94.17
48	15.42	13.25	32.30	26.88	60.42	49.59	116.67	95.00
49	16.25	13.34	34.38	27.09	64.59	50.00	125.00	95.84
50	17.09	13.75	36.46	28.13	68.75	52.09	133.34	100.00
51	17.92	14.59	38.55	30.21	72.92	56.25	141.67	108.34
52	18.75	15.42	40.63	32.30	77.09	60.42	150.00	116.67
53	20.00	16.25	43.75	34.38	83.34	64.59	162.50	125.00
54	21.25	17.09	46.88	36.46	89.59	68.75	175.00	133.34
55	22.92	17.92	51.05	38.55	97.92	72.92	191.67	141.67
56	24.59	18.75	55.21	40.63	106.25	77.09	208.34	150.00
57	26.25	20.00	59.38	43.75	114.59	83.34	225.00	162.50
58	27.92	21.25	63.55	46.88	122.92	89.59	241.67	175.00
59	30.00	22.92	68.75	51.05	133.34	97.92	262.50	191.67
60	40.00	24.59	93.75	55.21	183.34	106.25	362.50	208.34
61	42.09	26.25	98.96	59.38	193.75	114.59	383.34	225.00
62	44.17	27.92	104.17	63.55	204.17	122.92	404.17	241.67
63	46.67	30.00	110.42	68.75	216.67	133.34	429.17	262.50
64	49.17	40.00	116.67	93.75	229.17	183.34	454.17	362.50
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21	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
22	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
23	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
24	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
25	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
26	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
27	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
28	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
29	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
30	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
31	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
32	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
33	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
34	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
35	16.67	16.67	35.42	35.42	66.67	66.67	129.17	129.17
36	17.50	16.67	37.50	35.42	70.84	66.67	137.50	129.17
37	18.75	16.67	40.63	35.42	77.09	66.67	150.00	129.17
38	20.00	16.67	43.75	35.42	83.34	66.67	162.50	129.17
39	21.25	16.67	46.88	35.42	89.59	66.67	175.00	129.17
40	22.50	17.50	50.00	37.50	95.84	70.84	187.50	137.50
41	23.34	18.75	52.09	40.63	100.00	77.09	195.84	150.00
42	24.17	20.00	54.17	43.75	104.17	83.34	204.17	162.50

MONTHLY RATES

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	Male	Female	Male	Female	Male	Female	Male	Female
43	25.00	21.25	56.25	46.88	108.34	89.59	212.50	175.00
44	25.84	22.50	58.34	50.00	112.50	95.84	220.84	187.50
45	27.09	23.34	61.46	52.09	118.75	100.00	233.34	195.84
46	28.75	24.17	65.63	54.17	127.09	104.17	250.00	204.17
47	30.00	25.00	68.75	56.25	133.34	108.34	262.50	212.50
48	32.09	25.84	73.96	58.34	143.75	112.50	283.34	220.84
49	34.17	27.09	79.17	61.46	154.17	118.75	304.17	233.34
50	37.09	28.75	86.46	65.63	168.75	127.09	333.34	250.00
51	41.25	30.00	96.88	68.75	189.59	133.34	375.00	262.50
52	45.42	32.09	107.30	73.96	210.42	143.75	416.67	283.34
53	50.42	34.17	119.80	79.17	235.42	154.17	466.67	304.17
54	55.42	37.09	132.30	86.46	260.42	168.75	516.67	333.34
55	60.84	41.25	145.84	96.88	287.50	189.59	570.84	375.00
56	66.25	45.42	159.38	107.30	314.59	210.42	625.00	416.67
57	72.09	50.42	173.96	119.80	343.75	235.42	683.34	466.67
58	78.34	55.42	189.59	132.30	375.00	260.42	745.84	516.67
59	84.17	60.84	204.17	145.84	404.17	287.50	804.17	570.84
60	98.33	66.25	239.59	159.38	475.00	314.59	945.84	625.00
61	103.75	72.09	253.13	173.96	502.09	343.75	1000.00	683.34
62	109.17	78.34	266.67	189.59	529.17	375.00	1054.17	745.84
63	115.84	84.17	283.34	204.17	562.50	404.17	1120.84	804.17
64	124.59	98.34	305.21	239.59	606.25	475.00	1208.34	945.84
65	137.09	103.75	336.46	253.13	668.75	502.09	1333.34	1000.00

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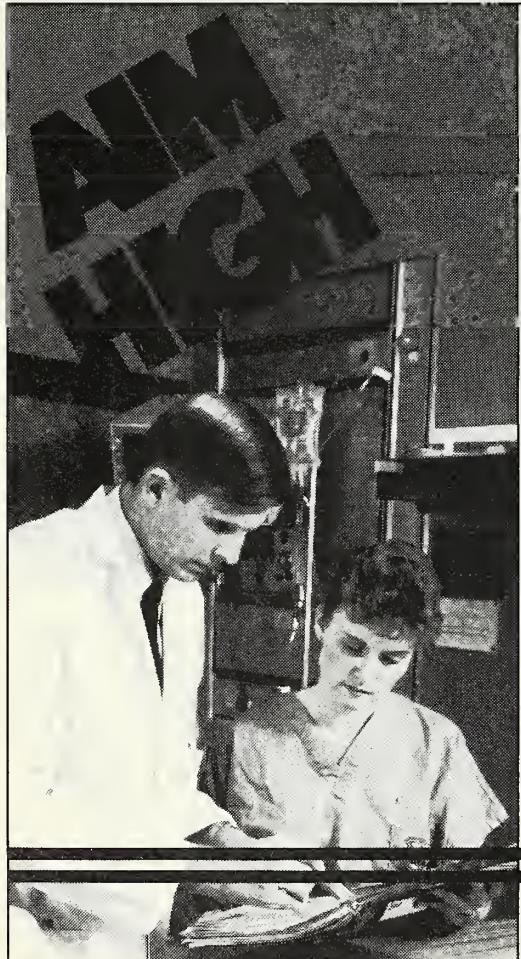
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AMS Newsmakers

Dr. Scott W.F. Carle, of Little Rock, and **Dr. Steven Collier**, of Augusta, were recently certified as Medical Review Officers for the American Association of Medical Review Officers, Inc. The organization, created in 1991, is a non-profit medical society dedicated to establishing national standards and certification of medical practitioners and other professionals in the field of drug and alcohol testing. In their positions, Carle and Collier will determine the validity of drug test results and assess whether an alternative medical explanation can account for a positive drug test result.

Dr. Steven P. Schoettle, a West Memphis general surgeon, was recently appointed to a three-year term as Crittenden Memorial Hospital's cancer liaison to the American College of Surgeons. Dr. David Winchester, medical director of the cancer department at the American College of Surgeons in Chicago, said Schoettle was chosen because of his leadership and support of the hospital's cancer program as well as other commission and cancer activities.

Dr. Eric Spann, a family practitioner in Green Forest, recently completed an in-depth program aimed at the identification and management of patients who are victims of violent acts. The six-day conference focused on how to identify physical and sexual abuse, how to preserve and document the evidence found and how that evidence applies to a court of law. The conference was funded by the Merlin Foundation's Multidisciplinary Team and the Arkansas Commission on Child Abuse, Domestic Violence and Rape.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of August 1996 are: Debra D. Becton, Little Rock; Charles R. Clifton, Hot Springs National Park; William C. Furlow, Conway; Terri J. Hymel, Little Rock; Michael B. Johnson, Little Rock; Stephen K. Magie, Little Rock; Anne Virginia Miller, Springdale; William V. Relyea, Cherokee Village; Ronald E. Revard, Springdale; M. Angelo Rivero, Little Rock and Lawrence J. Schemel, Springdale.

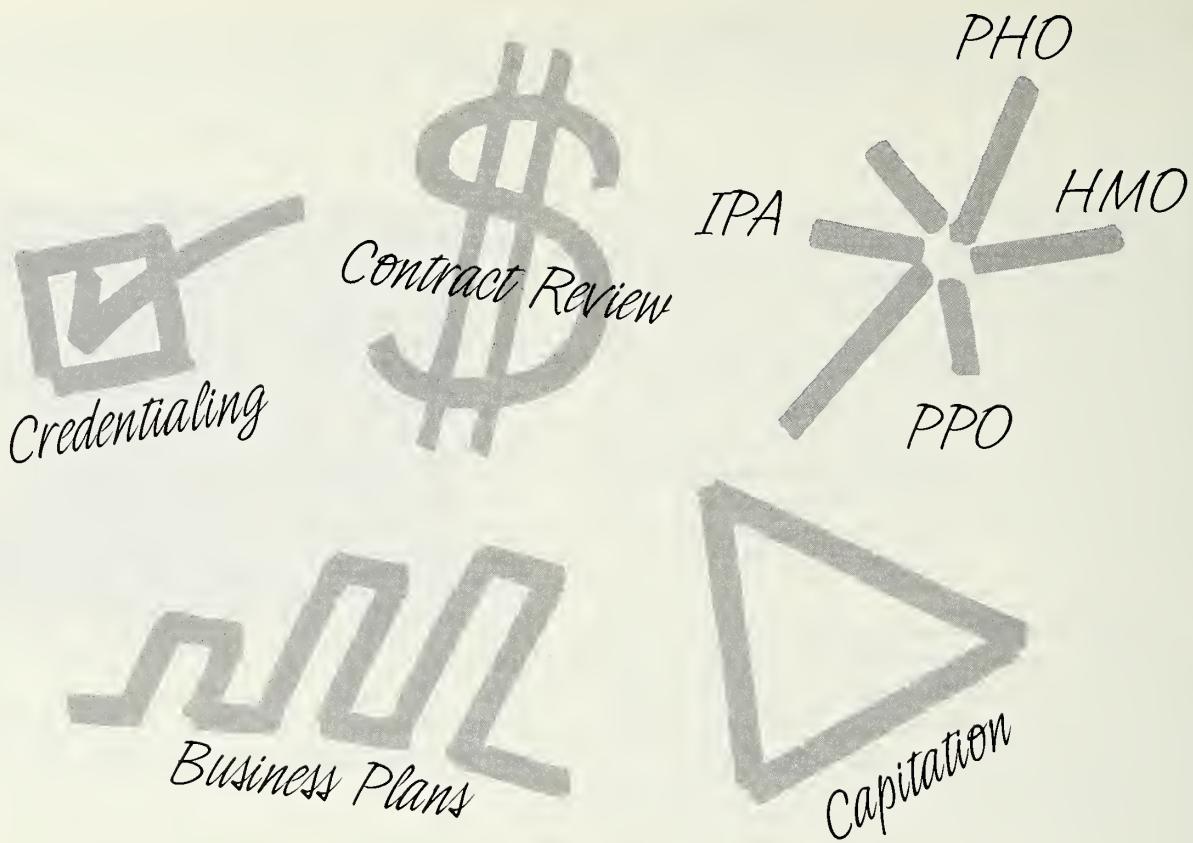
Dr. Scott Stinnett, a Siloam Springs family practitioner, was recently featured in *The Herald-Leader* newspaper for his award-winning photography. He said it's fun to win, but he doesn't do it for that - he does it for relaxation. Most recently Stinnett won the 10th Anniversary Pfizer Labs Photo Contest, and as a result, his photo was placed in the Pfizer calendar. Stinnett teaches photography in the community education classes offered in his community.



Scott Stinnett, M.D.

Send your accomplishments and photo for consideration in *AMS Newsmakers* to:

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New Member Profile

Suzanne W. Yee, M.D.

PROFESSIONAL INFORMATION

Specialty: Facial Plastics; Otolaryngology; Head and Neck Surgery

Years in Practice: One

Office: Little Rock

Medical School: UAMS, 1989

Internship/Residency: UAMS, 1990/1994

Professional affiliates/organizations: Arkansas Otolaryngology

Center, Pulaski County Medical Society, AMA, American Academy of

Otolaryngology - Head & Neck Surgery, American Academy of Facial

Plastic & Reconstructive Surgery and Associate Fellow to the American College of Surgeons

Honors/Awards: Barton Scholarship, Schlumber Award, John Whitney Award, Faculty Key, Roberts Key, Janet M. Glasgow Award for outstanding achievement, Resident Research Award - 2nd place, AOA, Phi Kappa Phi and Rho Chi Honor Society



PERSONAL INFORMATION

Spouse: Joe Bill Yee - a senior bank examiner with the Arkansas State Bank Department

Date/Place of Birth: July 16, 1961 in Helena, Arkansas

Hobbies: Painting T-shirts, Aerobics, Reading, Razorback Basketball and Football, Computers and Art

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: I can't imagine doing anything else

Worst habit: procrastination

Best habit: persistence

Favorite junk food: chocolate

Behind my back, they say: I'm a perfectionist - sometimes to the point of annoyance

I most value: my family

People who knew me in medical school, thought I was: a compulsive worrywart

The turning point of my life was when: I began caring for cancer patients and realized that I am so very lucky and I should never feel sorry for myself.

Nobody knows I: binge on late night snacks

Favorite vacation spot: Disneyland

One goal I haven't achieved yet: having children

One goal I am proud to have reached: is being the first child in our family to obtain a college degree in the United States

When I was a child, I wanted to grow up to be: a pharmacist

One of my pet peeves: procrastination

First job: working as a clerk at my parent's store

Worst job: working at Andy's hamburger restaurant

One word to sum me up: tenacious

My life philosophy: is to live one day at a time to the fullest

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Gastrointestinal Endoscopy Privileges in Arkansas - A Hospital Survey

Geoffrey Goldsmith, M.D., M.P.H.*

Introduction

Credentialing primary care physicians in procedures such as esophagogastroduodenoscopy (EGD) and colonoscopy is among the more contentious issues involving family physicians' privileging.^{1,2,3}

The purpose of our study was to obtain information on the privileging of family physicians in GI endoscopic procedures by hospitals in Arkansas. The importance of such credentialing decisions is significant since five of the state's seven family practice residencies are now teaching these procedures to their trainees and it is likely that all of the Family Practice residencies will do so in the future. With the expectation that many of the family practice residency graduates will be trained in GI endoscopy, and seeking privileges, requests for GI endoscopy privileges for family physicians will increasingly come to hospital credentials committees.

Methodology

In the winter of 1994, the University of Arkansas for Medical Sciences (UAMS), Department of Family and Community Medicine (DFCM) mailed a survey, with up to two telephone calls for follow up of non-respondents, to all Arkansas hospitals in order to ascertain whether these hospitals would provide "qualified" family physicians privileges in EGD and/or colonoscopy (referred to as GI endoscopy in this paper).

Results

Responses were obtained from 94 of the 98 hospitals surveyed (95.9% response rate). Two urban and 2 rural hospitals did not respond. The first row of data on Table 1 reveals that 54 of 94 respondents (57.5%) grant EGD and colonoscopy privileges to "qualified" family physicians. Forty of the hospitals do not offer endoscopy privileges to family physicians (42.5%). As noted on Table 1, of these 40 hospitals, 21 hospitals do not offer endoscopy to any physicians. These hospi-

tals pointed out that no physicians asked for GI endoscopy privileges at their hospital. Therefore, of the 94 hospitals that responded to the survey 73 are performing GI endoscopy. Of these 73 hospitals, 74% (54/73) provide endoscopy privileges to family physicians. Only 19 hospitals do not provide GI endoscopy privileges to qualified family physicians. An obvious question unanswered by study is how each hospital operationally defined the criteria by which family physicians can become "qualified" to perform GI endoscopy.

The UAMS DFCM surveyed eleven academic medical centers in the South Central region to ascertain whether family physicians in the academic centers were performing GI endoscopy (other than flexible sigmoidoscopy). We found that seven of the eleven family physicians were performing GI endoscopy. Lastly, we mapped out the practice sites of all board certified gastroenterologists listed as practicing in Arkansas.⁴ According to the ABMS, official "Directory of Board Certified Medical Specialists," in 1994 there only 52 board certified gastroenterologists practicing in Arkansas - See Figure 1.⁴

Discussion

While the state is about 47% rural, every gastroenterologist except for 6, practices in 15 of the larger towns or metropolitan statistical areas in Arkansas (See Figure 1). Of course, this is reasonable since a gastroenterologist needs a certain size of population for economic survival of the practice. In more rural communities, the family physician, general internist, generalist obstetrician/gynecologist, or general surgeon may be the only physicians conveniently located and qualified to provide GI endoscopy. There is less objection by Arkansas' rural hospitals to grant family physicians hospital privileges in GI endoscopy compared to urban, larger Arkansas hospitals. The author's informal discussions with many family physicians reveal that if their hospital does not grant endoscopy privileges to qualified primary care physicians, these generalists are likely to provide GI endoscopy in their clinical offices. Many family physicians don't seek hospital privileges and instead do the procedures in their offices.

* Geoffrey Goldsmith, M.D., M.P.H., is Professor and Chairman of the Department of Family and Community Medicine at UAMS.

TABLE 1
ARKANSAS HOSPITAL SURVEY OF FAMILY PRACTICE
ENDOSCOPY PRIVILEGES

SIZE OF HOSPITAL				
	<100 BEDS (n = 54) (n)	>100 BEDS (n = 44) (n)	TOTAL (n = 98) %* (n)	
FP PERFORM EGD/COLONOSCOPY AT YOUR HOSPITAL				
YES	(29)	(25)	57%	(54)
NO				
IF PROCEDURE NOT PERFORMED AT HOSPITAL BY FP, WHY NOT?	(23)	(14)	43%	(40)
No FPs or any other MD requested these privileges				(21)
GI endoscopy privileges refused to FPs				(19)
OF HOSPITALS WHERE GI ENDOSCOPY IS PERFORMED, PERCENTAGE THAT PROVIDE SUCH PRIVILEGES TO FPs			74%	(54)

**Rounding of % may result in >100% in total category*

While there is no "magic" minimum number of endoscopic procedures needed to assure competency in basic diagnostic endoscopy, it is the opinion of some family practice residencies and other training centers that trainees should present to the privileges committee evidence of 25 to 100 satisfactorily completed EGD's and 25 to 100 colonoscopies performed under direct supervision.⁵⁻⁹ The training must include cognitive training regarding indications, interpretations of diagnostic findings, contraindications, and management of complications. Inclusion of a specific number of endoscopic procedures can ensure that there is a minimum "track record" on which to base assessment of outcomes and skills but doesn't by itself assure competency. It is important to note that the American Academy of Family Physicians (AAFP) recommends against setting a specific number of procedures before giving privileges and emphasizes demonstrated competency

should be the only criterion used to judge whether a family physician should be granted GI endoscopy privileges.²

At the University of Arkansas for Medical Sciences, the Department of Family and Community Medicine requires that family physicians who seek credentials for GI endoscopy have completed didactic training in GI endoscopy and have completed at least 50 successful EGD's and colonoscopies in order to be eligible for GI endoscopy credentials without additional proctoring. Most family practice residency graduates are not trained to perform therapeutic GI endoscopic procedures. Usually, a family practice residency will provide residents an opportunity to enroll in an elective rotation of one month or more in GI endoscopy. Not all family practice residents in a given residency program will elect to take this additional GI endoscopy training.

Figure 1
**Practicing Gastroenterologists
 in Arkansas (1995)***



*From the official ABMS directory of Board Certified Medical Specialists 1995

Conclusion

This study is reassuring to those family practice residents who will be seeking GI endoscopy privileges. First, most of the Arkansas hospitals will afford the endoscopy trained family practice residency graduate endoscopy privileges. Secondly, because gastroenterologists are clustered in only fifteen larger communities in Arkansas, there is a strong demand for such services throughout most Arkansas communities.

Hospital credentialing committees can use a broad consensus of family practice training groups or the

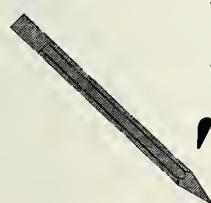
AAFP recommendations as the basis on which to grant family physicians GI endoscopy privileges. Furthermore, given the distribution of gastroenterologists in our state, the availability of endoscopy in rural communities will be greatly increased as graduating family practice residents in larger number graduate from their residencies with endoscopy skills.

Acknowledgement: The Department of Family and Community Medicine wishes to express its deep appreciation to Kay Berry who served as the research assistant for this project.

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Post Cesarean Section Death

J. Kelley Avery, M.D.*

Case Report

The patient was a 31-year-old mother of one who had an uneventful pregnancy except for some slight vaginal bleeding at 5 months gestation. The patient was observed in the labor and delivery area of the hospital, and the bleeding stopped spontaneously. No subsequent bleeding occurred. Her first baby was delivered by cesarean section and was known to be a normal child, now 5 years of age.

The patient came into the hospital at the expected time of delivery in early labor. She declined an opportunity to deliver vaginally and was taken to the operating room within two hours of her admission. It was Friday, and her regular attending obstetrician was not on call. His associate performed an uneventful cesarean section under epidural analgesia. The operative note did not describe any intraoperative problems. The development of the bladder flap was accomplished easily, and the uterus was entered through a low cervical incision. A healthy female infant was delivered with Apgar scores of 9/10. The remainder of the surgery proceeded without the slightest problem. The blood loss was estimated to be 500 cc.

The surgery was completed about 4:00 p.m., and the patient went to the floor about two hours later. The nurse's note at 4:45 p.m. described a "soft abdomen with normal bowel sounds." The first night after the surgery the patient was medicated five times for abdominal pain.

The first day after the surgery, another one of the associates in the group made rounds on this patient. The patient was medicated five times for pain and one time for "gas." The blood counts that morning were normal, and the abdomen was said to be "soft" and the bowel sounds "hypoactive" by the nurses. The next day, Sunday, the same associate made rounds and ordered "Magnesium Citrate 1/2 bottle now." The patient had been able to walk very little because of pain. The doctor noted the abdomen to be "distended

but soft." Bowel sounds were described as "occasional."

The following day, Monday, the patient's regular attending physician returned and made rounds in the hospital. The nurse's notes during the night described the abdomen as "distended and firm" and the bowel sounds as "hypoactive." Again, "firm, distended and tender" was the descriptive phrase used with reference to the abdomen. The patient had a small bowel movement during the night and "good results" in response to an enema at 8:00 a.m. The attending physician discharged the patient, noting that the abdomen was "distended, soft, and the bowel sounds normal."

In the discharge summary, the attending physician recorded the abdominal pain and distention with the comment that these complaints had responded to "cathartics, colon tube, and enemas."

The patient was readmitted to the hospital the same night because of "severe abdominal pain and distension." After discussion with the attending physician, the emergency room physician began NG suction, started IV fluids, and ordered abdominal x-rays and a CBC/urine. The CBC was remarkable in that there were reported 33% segmented neutrophils and 46% band forms in the smear. The films of the abdomen showed "a massive amount of free air in the abdomen" which was deemed "consistent with the recent cesarean section." The suspected diagnosis was intestinal obstruction.

The following day at 9:00 a.m. the attending physician felt that the abdomen was "distended, tender but not tense." Through the day the patient's urinary output was very low, and she was thought to be dehydrated. IV fluids were increased. A CBC was ordered for the night and was to be repeated the following morning. X-rays of the abdomen were also to be repeated in the morning. On both CBCs the band forms were reported to be 70% and 60% respectively. Vital signs through the night continued to show tachycardia of 120 to 140. The x-rays of the abdomen again showed free air which seemed not to have changed from previous films. A CT scan of the abdomen reported, "the amount of free air is inordinate for the surgery done and a perforated hollow viscus is suspected."

The patient was returned to the operating room,

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Company, Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in February 1994. It is reprinted here with permission.

where a perforation of the cecum was found, along with massive peritonitis. Cardiac arrest occurred during surgery. The patient was temporarily resuscitated, but arrest occurred again, and ultimately she died during the operation.

A lawsuit was filed, charging the attending physician and all his associates with negligence in the delay in diagnosing and treating the perforation of the colon. A negotiated settlement was the ultimate outcome of the lawsuit.

Loss Prevention Comments

The evaluation of abdominal distention in the post cesarean section patient is not an easy problem. Several factors could have contributed to the delay in diagnosis. The patient seemed to require an unusual amount of narcotics following her surgery. There was an apparent lack of continuity of care in that the patient was operated on by an associate, seen the first two days after surgery by another associate, and discharged from the hospital by the attending physician who had not seen her in the hospital.

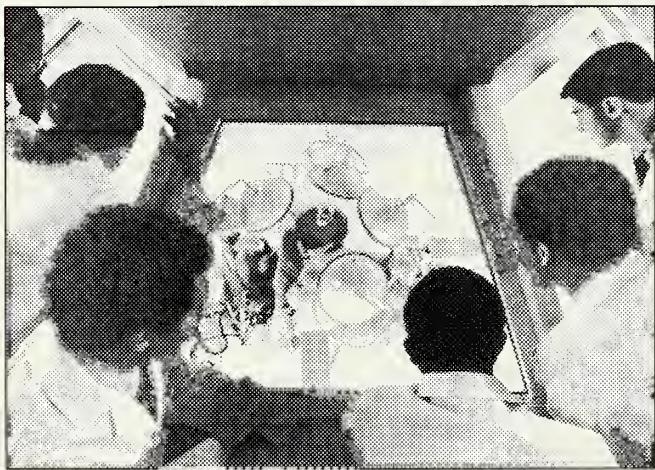
The readmission was the critical piece in this puzzle. This patient's distention continued and worsened, as did her pain and tenderness. With different

physicians seeing her almost daily, these very important findings were hard to evaluate. It is worth noting that the attending physician did not come into the emergency room and examine his patient.

Certainly one would expect free air in the abdomen following a cesarean section on the fourth post-operative day, but "massive" free air? The unusually high percentage of band forms in the differential could have been due to intestinal obstruction, persistent acidosis, and dehydration, but it would not be expected to persist in the absence of infection. The "free air" did not change significantly in 48 hours as one would expect, and clinically the patient continued to deteriorate.

Would the results have been any different if the patient had been reoperated upon as an emergency on readmission? Or, if the possibility of bowel perforation had been entertained, would antibiotics have helped? What was the cause of the perforation in the first place? Certainly, in the absence of underlying bowel pathology, the first consideration would have to be bowel injury at the first operation. Every decision made in the management of this patient could be explained and defended. However, the above circumstances, taken as a whole, made settlement the best option.

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J. David Talley, M.D.*

IIb/IIIa Platelet Inhibitors in the Management of Coronary Artery Disease

One of the truly remarkable recent advances in the management of coronary artery disease is the introduction and use of an antagonist to the IIb/IIIa platelet receptor. One drug with these properties is now commercially available (ReoPro, Centocor, B.V., Leiden, the Netherlands) for use in high-risk elective coronary angioplasty. Other indications are soon to follow. This issue of CCU will review the use of IIb/IIIa blocking agents in the management of coronary syndromes.

The Biology of the Platelet Surface

The platelet surface is composed of many transmembrane proteins which promote platelet adhesion to other platelets and the extracellular matrix. These proteins are called *integrins* and are composed of *α* and *β* subunits. The integrin $\alpha_{IIb}B_3$ (the glycoprotein IIb/IIIa receptor) is responsible for platelet-to-platelet binding and the integrin α_vB_3 (the vitronectin receptor) is essential for cell to extracellular matrix binding, angiogenesis, cell migration, and proliferation.¹ A monoclonal antibody (ReoPro) specifically binds the IIb/IIIa and vitronectin receptors preventing platelet-to-platelet binding and neointimal proliferation. ReoPro has improved, substantially, the treatment of thrombosis seen in acute coronary syndromes, including high and low-risk coronary angioplasty, acute myocardial infarction, and unstable angina pectoris. The development of oral analogues with activity against the vitronectin receptor offers the promise of halting or even preventing chronic atherosclerosis.²

High-Risk Coronary Angioplasty

Coronary angioplasty is plagued by a finite occurrence (approximately 5%) of acute closure of the instrumented vessel. Fracture of the endothelium, platelet activation and aggregation, and vessel thrombosis are key elements in the pathogenesis of this complication. ReoPro provides a molecular approach to interrupt this cascade. The landmark EPIC (Evaluation of c7E3 for the Prevention of Ischemic Complications) trial confirmed the beneficial effects of ReoPro.³ This study included 2099 patients who were at high likelihood of having an adverse outcome after coronary angioplasty. ReoPro was given as a bolus and followed by a 12 hour infusion. Acute ischemic events were decreased by 35% primarily due to a reduction of acute myocardial infarction. Patients who received the drug had more bleeding events, most frequently, at the site of vascular access. The cause of the bleeding was not defined; was it the ReoPro, or excessive heparin use? The findings of the EPIC trial provide the current Food and Drug Administration approved labeling indication for the use of ReoPro.

Low-risk Coronary Angioplasty

The beneficial effects of ReoPro include patients at low to moderate-risk for sustaining an adverse ischemic event after coronary angioplasty. The EPILOG (Evaluation in PTCA to Improve Long-Term Outcome with ReoPro GP IIb/IIIa Blockade) trial was prematurely concluded when the results of the interim analysis of 1500 patients found a *three-fold* decrease (8.1% to 2.6%, $p=0.00008$) in the occurrence of death and myocardial infarction. These beneficial effects were so profound

* J. David Talley, M.D., is Professor of Internal Medicine and Director of the Division of Cardiology, Department of Internal Medicine, UAMS Medical Center.

that the trial was halted by the Data and Safety Monitoring Board! The EPILOG trial also found that the use of lower doses of heparin eliminated the excessive bleeding rate seen in the EPIC trial. Thus, bleeding is due to heparin, not ReoPro.

Acute Myocardial Infarction

ReoPro is effective when given as adjunctive treatment with either coronary angioplasty or with a plasminogen activator (thrombolytic) to interrupt acute myocardial infarction. Data from the EPIC trial showed that ReoPro reduced the likelihood of recurrent vessel occlusion *five-fold* compared to standard heparin use. The combination of another IIb/IIIa platelet receptor blocker, integrilin (Cor Therapeutics, South San Francisco, CA) and t-PA given to patients with acute myocardial infarction, restored normal flow in the infarct related artery in nearly all patients.⁴ The mechanism of action of ReoPro in this situation is speculative, but is thought to be related to displacement of fibrinogen from the IIb/IIIa receptor. This action prevents fibrinogen polymerization and cross-linking and thus the formation of a mature clot.

Unstable Angina Pectoris

Endothelial disruption with subsequent platelet activation and aggregation is the cascade responsible for the development of unstable angina pectoris. IIb/IIIa platelet receptor blockers are effective in this clinical syndrome. Several IIb/IIIa blockers decrease the number and duration of ST-segment changes as documented with ambulatory monitoring, and clinical complications in patients with unstable angina pectoris.^{5,6,7} Definitive benefit awaited the results of the CAPTURE (Chimeric 7E3 Anti-Platelet Therapy in Unstable Angina Refractory to standard treatment) trial. This study was planned to enroll 1,400 patients with persistent angina pectoris despite the use of aspirin, heparin, and nitroglycerin. The addition of ReoPro to this medical regimen decreased the occurrence of death, myocardial infarction, and the need for urgent intervention within 30 days to 10.8% compared to 16.4% with standard treatment alone, $p=0.0064$.

Oral IIb/IIIa Platelet Inhibitors

The competition is rigorous among companies developing an oral IIb/IIIa inhibitor (Figure 1). To date, two main lines of investigation are being pursued, first, as an adjunct to standard therapy for patients undergoing coronary angioplasty, and secondly, as a substitute to aspirin for chronic administration. In vitro results of one of these agents used in patients undergoing coronary angioplasty has been reported.⁸ Xemilofiban (Searle, Skokie, IL, USA) is a prodrug and is a potent and specific IIb/IIIa inhibitor that provides dose dependent platelet inhibition up to 14 days. The benefits and limitations of the chronic administration of Xemilofiban are being evaluated in a clinical trial soon to commence (ORBIT: Oral Glycoprotein IIb/IIIa receptor blockade to inhibit thrombosis).

Genentech (South San Francisco, CA) is developing an oral agent aimed to replace aspirin for chronic use. This agent (Ro 48-3657) is a double pro-drug which undergoes intestinal and hepatic conversion and renal excretion. Approximately one-third of the drug is available as the active agent. This drug has completed phase I testing (104 patients) where it was shown to provide more than 75% platelet inhibition. It is now

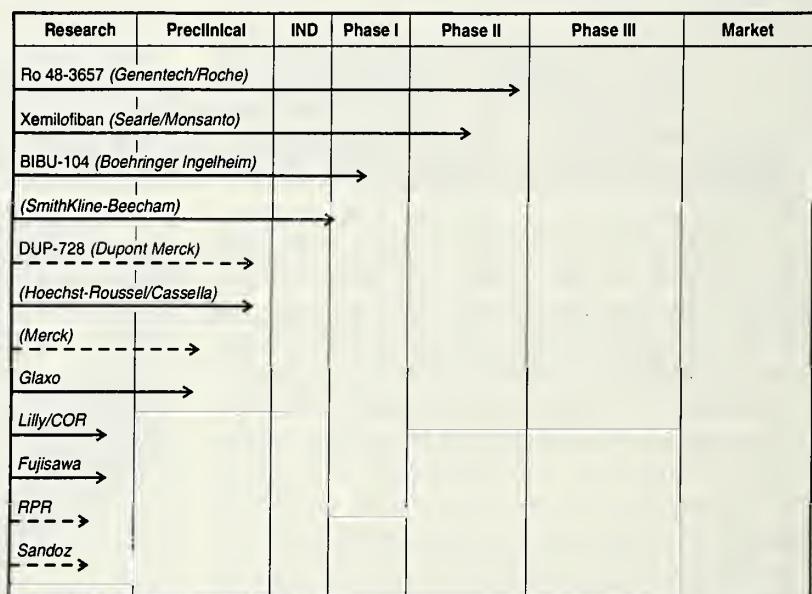


Figure 1: There is intense competition among the pharmaceutical companies to be the first to market an oral IIb/IIIa platelet receptor inhibitor. The various stages of development are illustrated. Dotted lines indicate assumed stage of drug development. (Information used in figure courtesy of M. Okamoto-Kearney.) With permission: Talley JD. News & views: progress in interventional cardiology (Editorial). J Interven Cardiol 1995;8:206-210.

Abbreviations: COR = Cor Therapeutics, Inc., IND = Investigational New Drug, RPR = Rhone-Poulenc Rorer Pharmaceuticals, Inc.

Death, MI or Revascularization at 30 Days

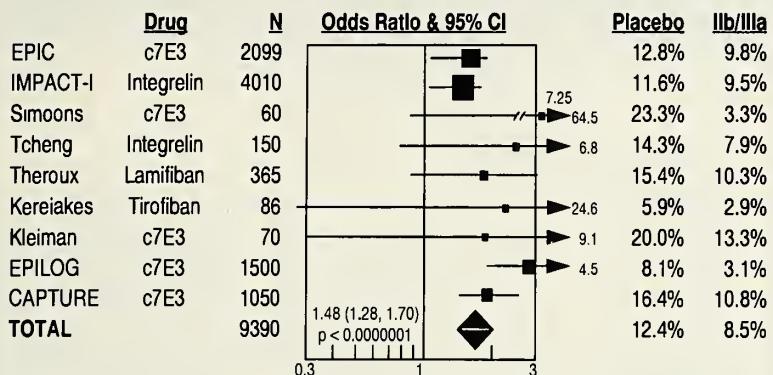


Figure 2: To date, there have been nine clinical trials using a variety of intravenous IIb/IIIa platelet receptor blockers. All nine studies have shown a decrease in the occurrence of death, myocardial infarction, or revascularization with the use of the IIb/IIIa drug. An odds ratio less than 1 indicates that the use of the drug was detrimental, an odds ratio greater than 1 indicates a beneficial effect of the medication. (Figure courtesy of EJ Topol and EM Ohman.)

Abbreviations: CAPTURE = Chimeric 7E3 Anti-Platelet Therapy in Unstable Angina Refractory to standard treatment, EPIC = Evaluation of c7E3 for the Prevention of Ischemic Complications, EPILOG = Evaluation in PTCA to Improve Long-Term Outcome with ReoPro GP IIb/IIIa Blockade, IMPACT = Integrelin to Manage Platelet Aggregation to Combat Thrombosis.

under evaluation in a phase II trial, TIMI (Thrombin and Thrombosis Inhibition in Myocardial Infarction and Ischemia)-12. This trial plans to enroll 260 patients who have experienced an acute ischemic event. The endpoints are pharmacokinetics, pharmacodynamics, and safety. A phase III trial is planned to enroll 15,000 patients with an efficacy endpoint.

Clinical Implications

IIb/IIIa platelet receptor inhibition represents a substantial advancement in the treatment of patients with coronary artery disease. These agents improve the outcome of patients undergoing high and low-risk coronary angioplasty, acute myocardial infarction, and unstable angina pectoris. As seen in Figure 2, IIb/IIIa platelet inhibitors have decreased the occurrence of death, myocardial infarction, or revascularization from 12.4% to 8.5%, $p < 0.0000001$. The risk of bleeding with these agents is diminished by using lower doses of heparin and carefully monitoring heparin activity. The introduction of oral agents may relegate aspirin to second line therapy.

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Mercury Update

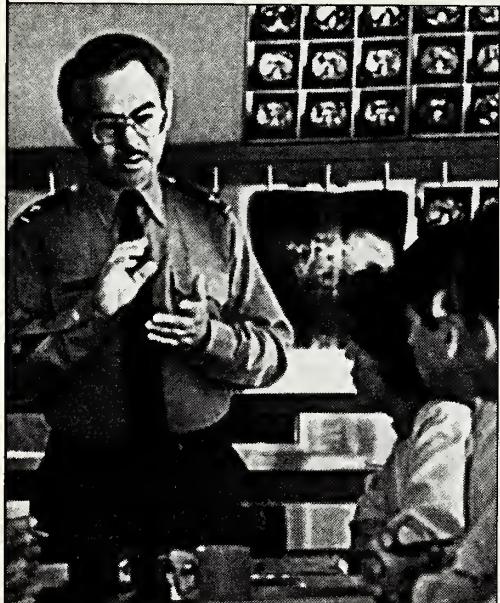
During the summer of 1992, several state agencies discovered that fish in several bodies of water in Arkansas contained methylmercury. From 1992 to 1994, fish from over 170 lakes and streams were collected for mercury testing. Twenty-three percent of these water systems contained fish which exceeded the FDA action level of 1 ppm in the edible flesh. Refer to the chart on the following two pages for a list of current fish consumption notices.

Fish species of greatest concern are largemouth bass and flathead catfish. The highest levels of mercury have been found in fish from southern Arkansas.

Those considered to be at the highest risk from methylmercury exposure include developing fetuses and young children up to seven years of age. Methylmercury primarily targets the central nervous system. In the general population, health effects include tingling or numbness in the mouth or nerve problems usually first noticed in the hands and feet. Vision and hearing could also be affected.

For more information, contact Stan Evans at the Arkansas Department of Health, Division of Epidemiology at (501)661-2986 during normal business hours.

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Current Fish Consumption Notices

Location	High Risk Groups*		General Public	
	Predators**	Non-Predators**	Predators**	Non-Predators**
Lake Columbia (Columbia County)	Large mouth bass less than 16 inches in length, crappie, channel and blue catfish - no restrictions. Do not consume all other predators.	No restrictions	Large mouth bass less than 16 inches in length, crappie, channel and blue catfish - no restrictions. No more than 2 meals a month of large mouth bass 16 inches or longer. Do not consume all other predators.	No restrictions
Cut-off Creek (from where the creek crosses Highway 35 in Drew County to its confluence with Bayou Bartholomew)	Do not consume	Do not consume	No more than 2 meals per month	Do not consume
Bayou Bartholomew (from where it crosses Highway 35 in Drew County to its confluence with Little Bayou in Ashley County)	Do not consume	Do not consume	No more than 2 meals per month	Do not consume
Grays Lake (Cleveland County)	Do not consume	Do not consume	No more than 2 meals per month	No restrictions
Moro Bay Creek (from Highway 160 to its confluence with the Ouachita River) (Bradley County)	Do not consume	Do not consume	Do not consume	No more than 2 meals per month
Champagnolle Creek (to include Little Champagnolle from Highway 4 to its confluence with the Ouachita River) (Calhoun County)	Do not consume	Do not consume	No more than 2 meals per month	No restrictions
Ouachita River (from Camden to the north border of the Felsenthal Wildlife Refuge to include all associated oxbow lakes, backwaters, overflow lakes, and barrow ditches) (Union, Ouachita, Calhoun Counties)	Blue catfish, channel catfish and crappie - no restrictions Do not consume all other predators.	No restrictions	Blue catfish, channel catfish and crappie - no restrictions Do not consume all other predators.	No restrictions
Felsenthal Wildlife Refuge to the state line (Union, Bradley, Ashley Counties)	Large mouth bass less than 13 inches and crappie - no restrictions Do not consume all other predators.	No restrictions	Large mouth bass less than 13 inches and crappie - no restrictions. Do not consume more than 2 meals per month of large mouth bass 13-16 inches in length, blue and channel catfish. Do not consume all other predators.	No restrictions
Saline River (from Highway 79 in Cleveland County to Highway 160 bridge)	Do not consume	Do not consume	No more than 2 meals per month	No more than 2 meals per month
Saline River (below Highway 160 to the Ouachita River)	Do not consume	Do not consume	Do not consume	No restrictions

Chart continued on next page

Location	High Risk Groups*		General Public	
	Predators**	Non-Predators**	Predators**	Non-Predators**
Dorcheat Bayou (Columbia and Nevada Counties)	Do not consume	Do not consume	No consumption of large mouth bass, 16 inches or longer. No more than 2 meals per month of all other predators.	No restrictions
Fouche La Fave River (from Nimrod Dam to the confluence of the South Fouche, Perry County)	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of large mouth bass, 16 inches or longer. No restrictions on all other predators.	No restrictions
Nimrod Lake (Yell and Perry Counties)	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of large mouth bass, 16 inches or longer. No restrictions on all other predators.	No restrictions
Cove Creek Lake (Perry County)	No consumption of large mouth bass, 12 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of large mouth bass 12-16 inches in length. No large mouth bass over 16 inches should be eaten. No restrictions for all other predators.	No restrictions
Lake Sylvia (Perry County)	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of large mouth bass, 16 inches or longer. No restrictions on all other predators.	No restrictions
Dry Fork Lake (Perry County)	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of large mouth bass, 16 inches or longer. No restrictions on all other predators.	No restrictions
Lake Winona (Saline County)	No consumption of black bass 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of black bass 16 inches or longer. No restrictions for all other predators.	No restrictions
Shepherd Springs Lake (Crawford County)	No consumption of black bass 16 inches or longer. No restrictions for all other predators.	No restrictions	No more than 2 meals per month of black bass 16-20 inches. No black bass over 20 inches should be eaten. No restrictions for all other predators.	No restrictions
Johnson Hole (South Fork of the Little Red River, Van Buren County)	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions	No consumption of large mouth bass, 16 inches or longer. No restrictions for all other predators.	No restrictions

* Pregnant women, women who plan to get pregnant, women who are breastfeeding, and children under the age of 7 years are considered **high risk groups** for health effects due to mercury exposure and as a general rule should not eat fish from the consumption notice areas.

**Predator species include bass, pickerel, catfish, crappie, gar and bowfin. Non-predator species include bream, drum, buffalo, red horse and suckers.

A meal consists of 8 ounces of fish.

Reported Cases of Selected Diseases in Arkansas

Profile for July 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases July 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases 1995	Total Reported Cases YTD 1994	Total Reported Cases 1994
Campylobacteriosis	38	129	91	153	99	187
Giardiasis	22	78	60	131	51	126
Shigellosis	15	54	75	176	108	193
Salmonellosis	66	217	139	332	165	534
Hepatitis A	39	304	296	663	66	253
Hepatitis B	5	50	38	83	32	60
HIB	0	0	5	6	2	5
Meningococcal Infections	1	27	26	39	36	55
Viral Meningitis	4	15	25	31	48	62
Lyme Disease	1	20	7	11	12	15
Rocky Mountain Spotted Fever	3	9	22	31	8	18
Tularemia	2	13	18	22	19	23
Measles	0	0	2	2	1	5
Mumps	1	1	4	5	5	7
Gonorrhea	***	***	***	5437	***	7078
Syphilis	***	***	***	1017	***	1096
Legionellosis	0	1	5	5	10	16
Pertussis	1	4	50	59	24	33
Tuberculosis	20	128	127	271	144	264

*** Unavailable at time of submission.



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HIV/AIDS Surveillance Program

Conducting Follow-up Investigations of Cases with No Identified Risk

Jan Bunch*

As cases of HIV and AIDS are reported to the Health Department during routine surveillance, many cases initially lack risk exposure information. Persons with HIV or AIDS who are reported without recognized risks for HIV are investigated by surveillance staff according to standard Centers for Disease Control and Prevention (CDC) protocols to identify risk information.

For epidemiologic purposes, HIV/AIDS risk exposures (among persons who have more than one possible risk for having acquired HIV) have been categorized into hierarchical exposure groups. However, it is important to collect information on all possible modes of transmission that are documented in the patient's medical record.

Collection of behavioral risk data is a crucial part of monitoring the HIV/AIDS epidemic, since data on behavioral risks for HIV is necessary for planning and evaluating prevention activities, following trends, making projections and identifying unusual transmission circumstances when they occur.

The HIV/AIDS Surveillance Program works closely with physicians and health care providers statewide to promote HIV/AIDS case reporting and in conducting confidential risk investigations when needed.

Surveillance staff routinely conduct on-site medical record reviews to assist physicians in meeting case reporting requirements. However, this service is provided only with the consent of or at the request of the physician. In most instances, patient medical records are reviewed by the physicians or their staff and the information requested is provided to the HIV/AIDS Surveillance Program.

In reality, it is not possible to be entirely certain about the source of HIV infection in all persons; the classification of AIDS cases according to mode of exposure is based on an assessment of the greatest likelihood of transmission in light of knowledge of the epidemiology of HIV infection.

* Jan Bunch is HIV/AIDS Surveillance Administrator at the Arkansas Department of Health.

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Arkansas HIV/AIDS Report

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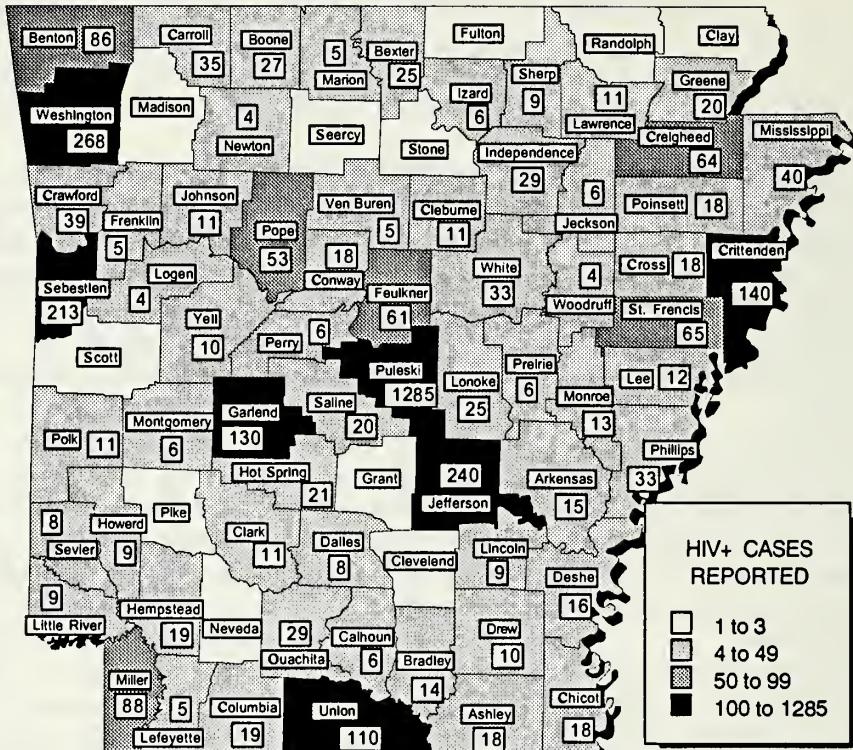
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



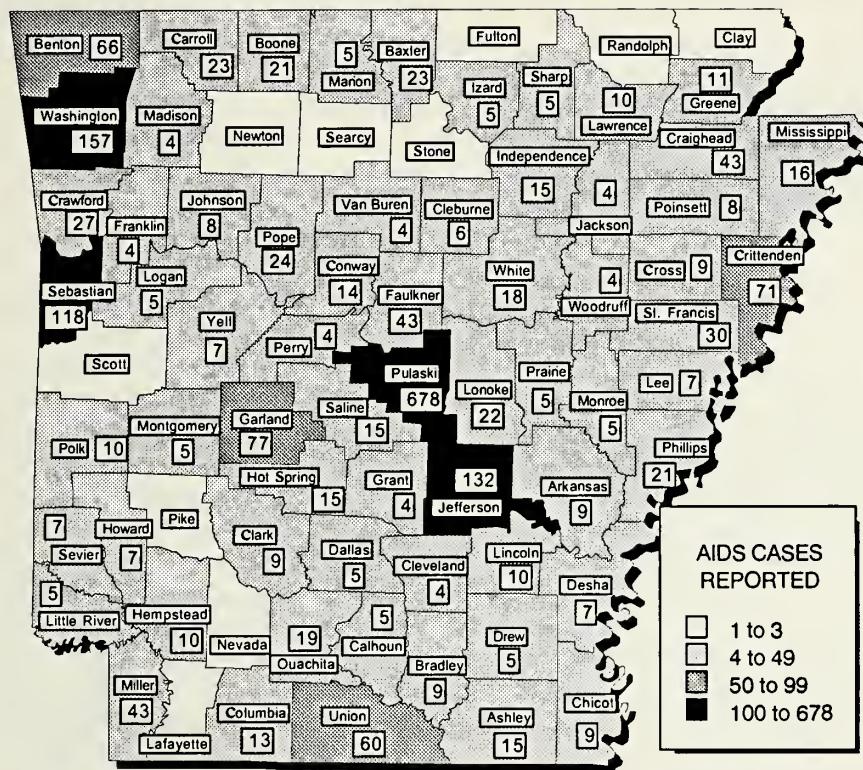
County of residence at the time of test for the 3,659 Arkansans reported to be HIV+ (8/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	100	215	248	413	400	392	352	367	338	195	3,020	83
	Female	8	26	37	68	85	81	94	90	91	59	639	17
A G E	Under 5	1	1	2	8	13	6	3	7	2	1	44	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	16	134	4
	20-24	12	40	52	71	44	49	64	60	47	24	463	13
	25-29	21	70	71	112	105	107	111	85	78	48	808	22
	30-34	25	50	64	116	120	111	91	102	101	52	832	23
	35-39	19	36	40	80	88	68	77	69	81	50	608	17
	40-44	16	17	17	43	50	41	47	50	46	25	352	10
	45-49	6	8	18	13	20	26	18	27	24	16	176	5
	50-54	2	1	5	8	14	14	10	12	17	11	94	3
	55-59	1	3	4	6	3	13	6	7	5	7	55	2
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	3	36	1
R A C E	White	87	170	174	328	298	293	278	260	260	131	2,279	62
	Black	21	69	108	151	184	173	163	184	159	111	1,323	36
	Hispanic	0	1	3	1	3	4	1	7	3	2	25	1
	Other/Unknown	0	1	0	1	0	3	4	6	7	10	32	1
R I S K	Male/Male Sex	65	138	144	245	250	261	242	230	166	79	1,820	50
	Injection Drug User (IDU)	13	30	48	74	96	76	65	73	52	15	542	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	26	12	249	7
	Heterosexual (Known Risk)	5	25	26	59	67	68	100	95	66	33	544	15
	Transfusion	5	5	4	6	8	10	0	2	3	0	43	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	0	19	31	39	16	10	7	24	111	115	372	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	254	3,659	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,659 Arkansans reported to be HIV+, 2,078 have been diagnosed with AIDS. (8/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	146	1,799	87
	Female	5	6	10	20	25	35	64	42	36	36	279	13
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	1	7	0
	13-19	0	0	0	4	3	2	4	3	1	2	19	1
	20-24	7	5	11	11	14	14	31	22	11	10	136	7
	25-29	24	22	13	44	43	67	78	45	47	28	411	20
	30-34	20	21	21	47	42	73	98	81	75	47	525	25
	35-39	19	15	20	31	38	55	80	52	49	41	400	19
	40-44	10	7	4	21	35	28	49	39	35	28	256	12
	45-49	5	3	3	14	6	24	28	22	17	13	135	6
	50-54	1	1	2	5	6	7	10	12	15	3	62	3
	55-59	2	2	4	1	4	8	8	5	6	5	45	2
	60-64	1	1	1	1	1	2	6	10	5	1	29	1
	65 and older	1	4	0	4	2	2	3	3	9	3	31	1
R A C E	White	74	61	58	141	134	206	273	190	174	96	1,407	68
	Black	16	20	21	47	66	75	121	102	97	84	649	31
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	166	138	78	1,208	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	48	14	297	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	14	168	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	35	26	216	10
	Transfusion	2	7	3	7	11	4	2	4	3	1	44	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	2	36	2
	Undetermined	0	2	1	3	1	1	2	8	20	47	85	4
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	182	2,078	100

Arkansas Department of Health HIV/AIDS Surveillance Program



Fishing is a key item on Mike Huckabee's agenda



When that four-pound rice field reservoir bass slammed into the white spinner bait, the biggest thing hooked was Mike Huckabee.

Arkansas' new governor remembers the occasion well, though it occurred in the early 1980s. He recalls it to the extent that there's always a white spinner bait in his tackle box. His present plans may not include a return to the scene of his first catch of a good bass, but fishing will be a personal focal point for Huckabee - not when he steps down as governor but right now.

He said, "There'll be times when I'll slip away from here (his office) and get out on the river and fish. It's good for you. It leaves your mind fresher, cleaner, and you're able to work better."

Growing up in Hope, it was natural for Huckabee to do a little cane pole fishing as a child. Then angling fell by the wayside in his busy teen years, with radio work and beginnings as a preacher weaved among his other sub-adult activities. A zip through Ouachita Baptist University, marriage and the ministry followed, and Huckabee met an angler named Gilbert Hatcher in Pine Bluff in 1981.

"He took me out on the river, and he made me learn the basics. He'd say, 'Here's how you tie on that lure,' and he'd make me do it. Then I met Herbert Phillips, a great bass fishermen, and he got me to the rice pond," Huckabee said.

Hooking a sportsman on bass fishing is usually followed by purchase of a bass boat. Huckabee said, "I got a used bass boat in 1984, a Cajun with a 115-horsepower Mercury motor. Then we moved to Texarkana, and my church had a building program. I sold the boat - and immediately I missed it."

Again, fishing took a back seat to other activities, including a run at the U.S. Senate that fell short and a shot at the lieutenant governor's post. He landed that one, but pressures built. A little over a year ago, Huckabee told his wife, Janet, he needed recreation. Fishing was his choice of a route, adding "I told her a boat is cheaper than a heart attack."

He said, "My 40th birthday came around last August. Our oldest son was going off to college, and we took our first vacation in three years. We went to Lake Greeson for my birthday. We were on a deck overlooking the lake with a bunch of friends, grilling hamburgers, when a boat approached and made a circle. It was a good-looking bass boat, really good looking. After a while, the boat came back, and a guy in it held up a sign. I tried to read it, and it got closer. Then I saw the fellow was a friend of mine, and he held up a sign that said, 'It's yours, Mike.' That was my birthday present, the bass boat. Janet had bought it.

"It was a BassCat Pantera II with a 150-horse Mercury motor, and it was just the right colors. Now you know why her calls always get through to me here at the governor's office."

Huckabee's fishing is often for largemouth bass but not exclusively. "I may take some live bait along, and if the bass aren't hitting, then I'll try for some bream or maybe catfish. Back when we lived at Pine Bluff, I got into some of those really big redear bream down there at Atkins Lake."

A fishing, and relaxation, delight for Huckabee is the Arkansas River. He's made friends with it since moving to Little Rock. "The Arkansas River is never the same," he said. "It's got mystery, it's got intrigue, and it's got that great fishing. I was at the BASS Masters Classics at Pine Bluff (1984 and 1985 - events that put the Arkansas River on the national bass fishing map). Some-

continued on next page

times I may not catch anything. I may go up toward Toad Suck, pull up to a sand bar or just lean back in the boat and watch the sky.

"The river is so interesting right here at Little Rock. Sometimes I'll go (downstream) near the end of the runway at the airport and just sit in the boat and watch those jets come right overhead. They look like they're about 20 feet over your head."

Fishing involves the other members of the Huckabee family but to a limited extent, he said. "My wife likes to fish sometimes but just when she's catching something. My oldest son isn't much on fishing, but my 16-year-old son fishes and duck hunts. He really likes that duck hunting. My daughter likes getting out on the boat and the water. With that bass boat, we do some skiing and tubing."

So, do the Huckabee fish wind up on the governor's mansion dinner table? "I've got a propane fish cooker," he said, "but most of my fishing is catch and release. Crappie is my favorite fish to eat, and I'm really not a crappie fisherman. Besides, if you figure the cost per pound of fish you catch, you're better off to go out and buy a fish dinner."

Huckabee's schedule book may become more crowded. There'll be no slacking off on demands for his time and attention. Budgets, taxes, appointments, political issues all await him daily at the Capitol - and there's a legislative session coming up in January.

Still, that spiffy Huckabee bass boat will be on the Arkansas River from time to time. "You can get out of here and be on the river in just a few minutes," he said. "We've got so much potential here for development on the Arkansas River, and I have something I really want to do. I want to put that bass boat in the river at Fort Smith and go all the way down to Dumas. Instead of town meetings, we can have river meetings with people along the way."

Meetings with people are fine, but that Huckabee river trek will surely have a fishing rod or two in the boat. There'll be a white spinner bait in the tackle box, too.

Welcome P&H Ostomy

Sunbelt Business Brokers is pleased to announce the sale of Noble Ostomy and Health Services to P&H Ostomy and Health Services of Little Rock. Steven Henry and Raymond Phillips are the principals of P&H and are planning to expand the current business and further develop the medical supply markets currently served.

L.J. and Maylene Carter started the business 13 years ago and have established a base in several medical supply market segments. Henry and Phillips are both experienced in the sales and management of retail and service companies.

Noble Ostomy is a major supplier of ostomy supplies in the mid south. P&H will continue to operate from the current location at 13001 Stacy, Little Rock.

If you are buying or selling a medically related business call the best, call 225-6008.



Sunbelt Business Brokers
11015 C Arcade Drive, Little Rock, AR 72212

Opportunity for practitioner to earn low stress extra income practicing preventative medicine with flexible hours and flexible schedule in Arkansas. Ten minutes from downtown Memphis, predominately healthy patient population. Nutrition/weight, loss/weight training background helpful. Part-time/full-time, day/evening/Sat. office hours available. Send CV to:

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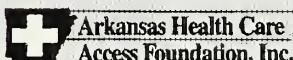
To
those physicians who volunteer
through the Arkansas Health
Care Access Foundation,

Thank You!

As you can see from a sampling of
letters we have received, your
involvement in our program is
appreciated and in many
cases life-saving.

I would like to say thank you first
of all. Your program made it
possible for me to have a
mammogram when I had no
where else to turn. I did not
realize there was such a program.
...it is a much needed program.
Thanks again.

For more
information
on how
you can help,
call AHCAF at
(501) 221-3033
or (800) 950-8233



It has been three days since you
sent me to the doctor and I have
a ways to go to be 100%, but I can
breathe and walk across the room
now. I had given up hope almost,
and I remembered Arkansas Health
Care. The doctor gave me two of
the medicines I needed and the
pharmacy you sent me to filled the
antibiotics. Your doctor even
"chewed" me out for not coming in
two weeks previously. I'm starting
to feel good again. God bless you.

Western Wildlife

As Easterners moved West, pioneers
found animals as exotic as the lands
buffalo, prairie dogs, bears, beavers, moose,
sheep, cougars, wolves and rattlesnakes.

The eagle became a national symbol.



I wanted to thank everyone
involved with this
program. We had no
one else to turn to
and we were in desperate
need of doctors and
medications.
Your program has
helped us through a very
difficult time.

Arkansas Health Care Access
Foundation

P O Box 56248

Little Rock AR

72215-6248

Due to your generous
assistance, I was able to
see an eye doctor and no
longer fear the loss of my
vision. Thank you all for
being there.

When I needed medical
attention, I was blessed with the
knowledge of your program.
There were kind and helpful
people to guide me.

THANK YOU FOR MAKING THE DIFFERENCE!

New Members

BULL SHOALS

Crow, Ronald Melton, Internal Medicine. Medical Education, University Health Sciences College of Osteopathic Medicine, Kansas City, MO, 1974. Internship, Wright-Patterson AFB, Dayton, Ohio, 1975. Residency, Keesler AFB, Biloxi, MS, 1978. Board certified.

CONWAY

Gray, George T., III, Family Practice. Medicine Education, Oklahoma State University College of Osteopathic Medicine, Tulsa, 1985. Internship Harborside Hospital, St. Petersburg, FL, 1986. Board certified.

FAYETTEVILLE

Fink, Roger Lee, II, Pathology. Medical Education, University of Missouri School of Medicine, Columbia, MO, 1991. Residency, UAMS, 1996. Board pending.

Harris, David Jay, Radiology. Medical Education, University of Oklahoma, Oklahoma City, 1992. Residency, University of Oklahoma, 1996. Board pending.

Saitta, Michael R., Rheumatology. Medical Education, Johns Hopkins, Baltimore, MD, 1984. Internship/Residency, Johns Hopkins Hospital, 1985, 1987. Board certified.

Travis, Patrick M., Hematology/Oncology. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1993.

HOT SPRINGS

Agee, Kimberly R., Pulmonary & Critical Care Medicine. Medical Education, UAMS, 1985. Internship/Residency, Kansas University Medical Center, 1986/1988. Board certified.

JONESBORO

Patel, Dharmendra V., Cardiology. Medical Education, MS Ramaiah Medical College, Bangalore University, India, 1989. Internship/Residency, ETSU Affiliated Hospitals, 1993/1996. Board certified.

LEWISVILLE

Nix, John Edward, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC-SW, 1994/1996.

LITTLE ROCK

Forte, Judith Lynn, Transplant Nephrology. Medical

Education, UAMS, 1989. Internship, UAMS, 1992. Fellowships, UAMS, 1994 and North Carolina Baptist Hospital, Bowman Gray School of Medicine, 1996. Board certified.

Greenwood, Denise Rochelle, General Surgery & Diseases of the Breast. Medical Education, University of Texas at Galveston, 1987. Residencies, State University, Kings County Hospital Center, Brooklyn, NY, 1988; New Hanover Memorial, Wilmington, NC, 1990; and Marshall University School of Medicine, Huntington, WV, 1992.

Jaffar, Muhammad, Anesthesiology/Critical Care. Medical Education, UTESA University School of Medicine, Santo Domingo, Dominican Republic, 1986. Internship/Residency, Maimonides Medical Center, Brooklyn, NY, 1992/1995. Board pending.

Reid, Graham M., Psychiatry. Medical Education, UAMS, 1978. Internship, Fort Smith, AR, 1979. Residency, University of Texas, Galveston, 1982. Board certified.

Ruddell, Deanna N., Allergy-Immunology. Medical Education, UAMS, 1991. Internship/Residency, Arkansas Children's Hospital, 1992/1994. Board certified.

MOUNT IDA

Bearden, Jeffrey Charles, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, AHEC-NE, 1994/1996. Board pending.

PINE BLUFF

Stark, James Edgar, Diagnostic Radiology. Medical Education, Univ. of South Alabama, Mobile, 1988. Internship/Residency, UAMS, 1989/1992. Board certified.

RUSSELLVILLE

Coombe Moore, Jackie M., Psychiatry. Medical Education, UAMS, 1992. Internship, Pine Bluff AHEC, 1993. Residency, UAMS, 1996.

SHERWOOD

Sanders, Kelli Keene, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996.

SPRINGDALE

Cunningham, Darrin D., Obstetrics/Gynecology. Medical Education, Oklahoma State University, Tulsa, 1991. Internship/Residency, Hillcrest Health Center, Oklahoma City, OK, 1992/1996. Board eligible.

OUT OF STATE

Bailey, Christopher Arnold, Pulmonary & Critical Care, Internal Medicine, Pediatrics. Medical Education, University of Oklahoma College of Medicine, Oklahoma City, 1989. Internship/Residency, University of Oklahoma Health Sciences Center, 1990/1993. Board certified.

Itzig, Charles Blum, Jr., General Surgery. Medical Education, University of Mississippi School of Medicine, Jackson, 1965. Internship, Baptist Memorial Hospital, Memphis, TN, 1966. Residency, VA Hospital, Memphis, TN, 1970. Board certified.

RESIDENTS

Guerrero, David Andrew, Family Practice. Medical Education, Stanford School of Medicine, Stanford, CA, 1995.

Hill, Chad, Obstetrics/Gynecology. Medical Education, UAMS, 1994.

STUDENTS

Christopher Scott Bryant
Brian McDonald Cate
Brent Daniel Chavis
David Wayne Crownover
Brian E. Deuter
Andrew Alex Finkbeiner
Martha Gene Garrett-Shaver

Charles Kristian Hanby
Katherine Anne Haynes
Brent Edward Holt
David Edward Keller
James Stacey Klutts
Khim Kirsten Lam
Russell Allen Linsky
Ellen Lu
Andrew Ryan Martine
Bill R. McCourtney, II
Brian Blake Norris
Rebecca Lynn Osborne
Gill Gibson Pillow
James Hargraves Pillow
Angela Michelle Price
Tara Patrice Reynolds
Rusty Lynn Roberts, Jr.
Philip K. Sadler
Kai Sheng
Susanna E. Shermer
Chad Leon Sherwood
Brian Rush Simpson
Christopher William Sorrels
Aaron Michael Spann
Justin Don Warner
Aaron Eugene White
Mark Courtney Williams
W. Frank Williams
Lonnie Benton Wright



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- A stronger, unified voice for the family of medicine

Call the AMSA at **501-224-8967** to ask whether your county has an organized alliance. If it doesn't, your spouse can become a Member-at large and will receive all the publications and information from state and national, as well having an opportunity to participate in state-wide projects.

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P.O. Box 55088
Little Rock, AR 72215-5088

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SOCIETY ALLIANCE**

Name: _____

Address: _____ County: _____

City: _____ State: _____ Zip: _____

Phone: _____ Legislative District: _____

Would you be willing to contact your Senator or Representative regarding health care issues? Yes No

Physician's Name: _____ DOB: _____ Specialty: _____

Arkansas Medical Society Alliance News

OFFICERS ATTEND NATIONAL CONVENTION



Ruth Mabry, president; Evelyn Thomas, immediate past president; and Barbara Moody, president elect; attended the American Medical Association Alliance convention in Chicago June 22-25.

WILLIE OATES BEARS OLYMPIC TORCH



Willie Oates, who has been a state and county president, was among those chosen to help carry the Olympic Torch through Arkansas. Torch bearers were chosen on the basis of their leadership and service to community organizations.

Willie says, "Being a torch bearer was the most exciting thing I have ever done; and I have done a lot of exciting things—but it made goose bumps on my arms to see the crowd laughing and crying at the same time—made me proud to be an American."

She said the young man with her was from the School for the Deaf and served as her escort—all torchbearers had escorts.

FIFTY-YEAR CLUB FOUNDED

Twenty-five persons who have been members of the AMSA for 50 years or longer were honored at the Annual Session. During the Installation Luncheon at Cafe St. Moritz, the four 50-year members present were presented with certificates of recognition and paperweights featuring the Alliance logo. The mementos were mailed to those who could not attend. Every member attending convention also received "Memories," papers written by AMSA Historian Rita Rodgers, highlighting the accomplishments and recollections of some of the 50-year members. President Evelyn Thomas stressed the important role these members continue to play as part of the organization's "heritage."



Left: Mrs. Jeanne Hundley, formerly of Pine Bluff, now of Little Rock, is a 50-year member who has been state president and president of two county alliances.



Mrs. Corrine Price, member-at-large for 58 years, is presented her certificate and mementos by Rita Rodgers, (left) AMSA historian



Mrs. Marguerite Henry and Mrs. Marie Smith display their 50-year honors

ARKANSAS MEDICAL SOCIETY

FALL MEETING

NOVEMBER 16-17, 1996
LAKE HAMILTON RESORT
HOT SPRINGS, ARKANSAS

The Arkansas Medical Society conducts a Fall Meeting every two years for the general membership and the House of Delegates to discuss issues to be addressed in the upcoming session of the Arkansas General Assembly. The intrusion of government into the practice of medicine grows stronger every year and 1997 will be no exception!

Among the topics to be discussed are:

- *Disclosure by third-party payors of policies affecting patient care and choice...
- *The scope of practice expansion of allied health providers including nurses, acupuncturists, podiatrists, CRNA's, optometrists and others (this includes limitations on medical assistants, surgical techs and other physician trained personnel)...
- *Efforts by trial lawyers to increase your exposure thereby increasing your insurance premiums...
- *Public health issues from AIDS, smoking and guns to motorcycle helmets and the testing of doctors for infectious diseases...
- *Plus much more...

The proposed bills for the 1997 Legislative Session may change the way you practice medicine, and your presence at the Arkansas Medical Society Fall Meeting is very important.

SATURDAY, NOVEMBER 16, 1996

9:00 a.m.	Leadership Workshop for Officers & Councilors
11:00 a.m.	Council Meeting
12:30 p.m.	Afternoon free for golfing, shopping or watching the Hogs on TV
6:30 p.m.	Happy Hour - <i>Spouses invited</i>
7:00 p.m.	Dinner - <i>Spouses invited</i>

SUNDAY, NOVEMBER 17, 1996

9:30 a.m.	Committee Meetings (TBA)
10:30 a.m.	Brunch - <i>Spouses invited</i>
Noon	House of Delegates
	Discussion of Probable 1997 Legislative Issues
2:30 p.m.	
or	Council Meeting (Wrap-up and Budget)
3:00 p.m.	

Casual attire appropriate for all events

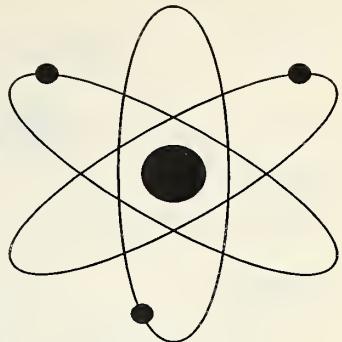
**For More Information, Contact the Society office at
501-224-8967 or 1-800-542-1058**

Radiological Case of the Month

Steven R. Nokes, M.D., Editor

Authors

Steven R. Nokes, M.D.
W. Bradley Pierce, M.D.
Jeffrey J. Carfagno, M.D.
Beverly A. Beadle, M.D.
John H. Yocom, M.D.



History:

A 42-year-old woman presented with right knee and leg pain. An EMG revealed an isolated peroneal nerve abnormality. An MR scan of the right knee and calf were performed.

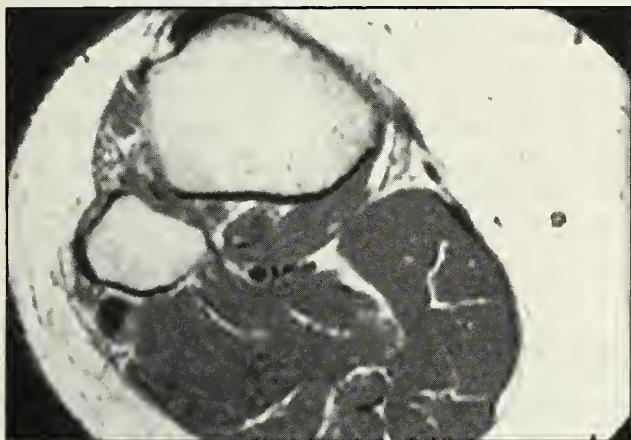


Figure 1A

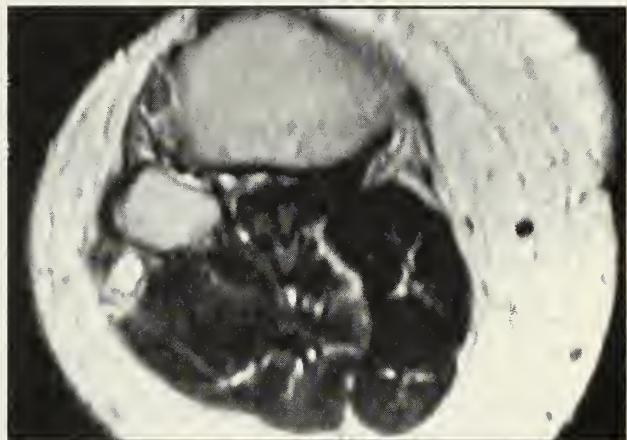


Figure 1B



Figure 2A

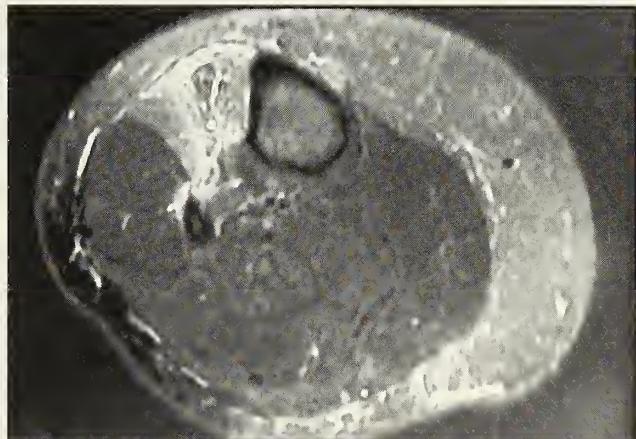


Figure 2B

Figures:

Figures 1A and B. Axial T1 and fast spin echo T2 weighted images at the level of the fibular head.
Figures 2A and B. Axial fast spin echo T2 weighted images with and without fat saturation through the upper calf.

Peroneal Nerve Ganglion Cyst

Diagnosis:

Peroneal nerve ganglion cyst.

Findings:

A small (7mm) round mass is seen in the common peroneal nerve posterior to the fibular head. It is low signal on T1 weighting and very high signal on T2 weighting. The mass did not enhance. The findings are characteristic of a ganglion cyst. High signal is seen in the tibialis anterior and extensor digitorum longus muscle on T1 and T2 weighted images characteristic of both fatty replacement (T1 high signal) and denervation edema (T2 high signal) secondary to the cyst.

Discussion:

The pathogenesis of peroneal nerve ganglion cysts is debated. One school holds that these represent cystic degeneration of the nerve sheath, but most believe the origin is from the synovial capsule of the proximal tibiofibular joint with extension along the recurrent superior tibiofibular articular branch of the common peroneal nerve. Once the cyst reaches the common peroneal nerve it loses its communication with the joint. The ganglion may enlarge at this point and present as a palpable mass. Signs and symptoms include pain and paresis of the foot extensors.

MR imaging is the technique of choice in evaluation an isolated peroneal nerve palsy. The exam requires high resolution imaging with gadolinium to exclude a neuroma. Muscular denervation and atrophy are important secondary signs of a lesion that are difficult to appreciate without STIR or fat-saturation techniques.

Surgical resection is the treatment of choice. Excision without neurologic loss is possible as the nerve fibers are not primarily involved by the pathophysiologic process.

References:

1. Stack RE, Bianco AJ, MacCarty CS. Compression of the common peroneal nerve by ganglion cysts. *J Bone Joint Surg* 1965; 47-A: 773-778.
 2. Coakley FV, Finlay DB, Harperum, Allen MJ. Direct and indirect MRI findings in ganglion cysts of the common peroneal nerve. *Clin Radiol* 1995; 50:158-159.
 3. Spillane RM, Whitman CJ, Cheu FS. Peroneal nerve ganglion cyst. *AJR* 1996; 166:682
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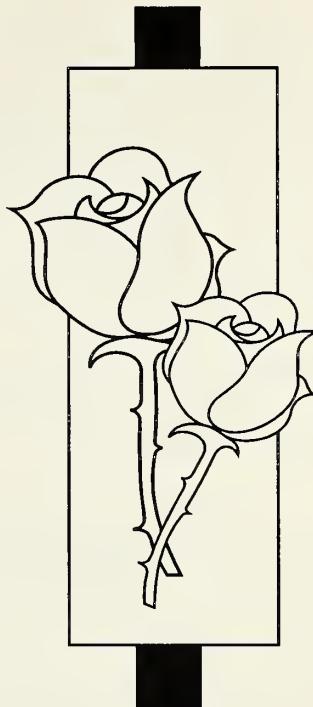
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In Memoriam

Maurice J. Elovitz, M.D.

Dr. Maurice J. Elovitz, of Austin, TX, and formerly of Helena, AR, and Boston, Mass., died Thursday, September 5, 1996. He was 64. He is survived by two daughters, Charlene Elovitz, and Audrey Glaser and her husband, Bart, all of Austin, TX; sons Robert Elovitz, Jonesboro, AR, and Russell Elovitz and his wife, Ellen, Olney, Maryland; sister, Betty Adelman, Delmar, NY; his former wife, Rhoda Elovitz, Austin, TX, and three grandchildren.



Resolutions

William Wood Abbott, M.D.

WHEREAS, the members of the Pulaski County Medical Society note with heart-felt sorrow the recent death of an esteemed member, William Wood Abbott, M.D.; and

WHEREAS, Dr. Abbott served this organization as an active and faithful member for over thirty-eight years; and

WHEREAS, his devotion to his country was evidenced by his distinguished service as a pilot in the United States Air Force during World War II; and

WHEREAS, Dr. Abbott's caring and capable practice of Anesthesiology earned him the respect and devotion of his patients and colleagues alike;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the archives of this Society; and

THAT, a copy of this resolution be sent to Dr. Abbott's family as an expression of our genuine sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Walton R. Warford, M.D.

WHEREAS, the membership of the Pulaski County Medical Society is saddened to learn of the recent death of a respected member, Walton R. Warford, M.D.; and

WHEREAS, Dr. Warford was a loyal member of this Society for over half a century; and

WHEREAS, Dr. Warford's memory will live on as a testament to the highest ideals of medicine;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the permanent files of this Society; and

THAT, a copy be forwarded to Dr. Warford's family as a token of our sincere sympathy; and

THAT, a copy be forwarded to *The Journal of the Arkansas Medical Society* for publication.

All Resolutions Adopted

Board of Directors

August 21, 1996

By Order of the Memorials Committee

Fred O. Henker, III, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

Things To Come

ARKANSAS LOCATION

October 25 and 26

Breast and Cervical Cancer Screening and Diagnosis. UAMS Campus, Little Rock. Interactive video site available statewide. CME hours available. For more information, call Dianne Crippen, R.N., Arkansas Department of Health, at (501) 661-2636.

ARKANSAS LOCATION

November 16 and 17

Arkansas Medical Society Fall Meeting. Lake Hamilton Resort, Hot Springs. For more information, call (501) 224-8967 or 1-800-542-1058.

November 1 - 3

New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 14 - 17

15th Annual Scientific Meeting - Pain and Disease: Causes, Consequences, and Solutions. Sheraton Washington Hotel, Washington, DC. Sponsored by the American Pain Society. For more information, call (847) 375-4715.

Keeping Up

November 2

Third Regional Holt-Krock Pediatric Conference. Time: 8:15 a.m. to 2:30 p.m. Location: Sparks Regional Medical Center Education Center. Program presenters: Holt-Krock Clinic, Sparks Regional Medical Center and AHEC. Accrediting organization sponsoring program: AHEC-Fort Smith.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

February 8-10, 1997

12th Annual Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Center for Continuing Medical Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 9-14, 1997

Advances in Imaging: 1997. Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Tulane University Medical Center and Louisiana State University School of Medicine. For more information, call (504) 588-5466 or 1-800-588-5300.

November 2-3

American College of Physicians - Fall Chapter Meeting. Time: Registration and continental Breakfast, 8:30 a.m. Location: Holiday Inn West, Little Rock. Program presenters: UAMS Department of Internal Medicine. Accrediting organization sponsoring program: UAMS College of Medicine.

HARRISON-NORTH ARKANSAS MEDICAL CENTER
Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

*Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.*

LITTLE ROCK-BAPTIST MEDICAL CENTER

*Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.*

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

*Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom*

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

*Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.*

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

*Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom*

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

*ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital*

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Gynecologic Malignancies, 3rd Thursday every other month, 7:00 a.m., various area hospitals
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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MANUSCRIPT STYLE

Author information should include titles, degrees, and any hospital or university appointments of the author(s). All scientific manuscripts must include an abstract of not more than 100 words. The abstract is a factual summary of the work and precedes the article. Manuscripts should be typewritten, double-spaced, and have generous margins. Subheads are strongly encouraged. The original and one copy should be submitted. Pages should be numbered. Manuscripts are not returned; however, original photographs or drawings will be returned upon request after publication. Manuscripts should be no longer than ten typewritten pages. Exceptions will be made only under most unusual circumstances.

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REFERENCES

References should be limited to ten; if more than ten are listed, the author(s) may designate the ten most significant to be printed and readers will be referred to the author(s) for the complete list. References must contain, in the order given: name of author(s), title of article, name of periodicals with volume, page, month and year. References should be numbered consecutively in the order in which they appear in the text. Authors are responsible for reference accuracy.

ILLUSTRATIONS

Illustrations should be professionally drawn and/or photographed. Glossy black and white photos are preferred. They should not be mounted and should have the name of the author(s) and figure number penciled lightly on the back. An arrow should indicate the top of the illustration. In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material. Up to four illustrations will be accepted at no charge to the author(s). If more than four are necessary, it is understood that the author(s) will be responsible for the reproduction costs.

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 6

November 1996

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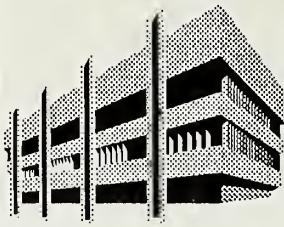
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Long Term Complication of Button Gastrostomy Tube

Paul A. Hellstern, M.D.*

C.V. Netchvolodoff, M.D.**

W.A. Qureshi, M.D.***

Introduction

The early eighties has seen the introduction of percutaneous endoscopic gastrostomy (PEG) tubes, with widespread benefits for patients who would otherwise require surgical placement of feeding tubes.¹ As more patients who are not nursing home dependent, require gastrostomy tubes, less conspicuous and cumbersome feeding tubes to prevent interference with their lifestyles have been developed. With the introduction of the button in 1984, these objectives have been achieved with relatively few complications, most occurring during placement.² We believe this case report is the first reported major long term complication of a button gastrostomy.

Case Report

A 73-year-old white male with a long history of tobacco abuse was diagnosed in August 1991 with a T₄NoMo squamous cell carcinoma of the buccal mucosa and right mandible. He underwent resection and reconstructive surgery. Post-operatively, he developed Methacillin Resistant Staphylococcus Aureus (MRSA) infection at the surgery site which was treated successfully. In December 1991, he underwent Ponsky PEG placement because of dysphagia and poor nutritional status. Ten days after placement, erythema was noted around the site. Culture grew out MRSA. It was felt that the patient was colonized since the erythema improved spontaneously over several days.

In August 1992, he returned for a PEG-tube check and possible replacement with a button. It was decided to replace the PEG with a button because the patient was active and wished a less conspicuous tube.

The PEG was removed without incident, endoscopically. After measuring the tract length, a 24 French 2.4 cm. button was placed.

He did well until almost one year later, when he returned before his scheduled appointment complaining of drainage and mild redness around the button site. On physical exam, he had no abdominal pain or fever. The button was flush with the abdominal wall and freely moveable along its longitudinal axis. The exudate was cultured and subsequently grew MRSA. He was placed on oral as well as topical antibiotics and instructed to return in one week.

When he returned, the button was protruding associated with raised surrounding tissue. The peristomal site was tender with drainage and exudate on pressure (see photographs). Fluid would not flow through the button. It was not freely movable and could not be removed with the obturator. We felt the button had migrated into the abdominal wall. At endoscopy only a dimpled area marked the previous button site on the inside wall of the stomach. When the button was manipulated, a small amount of exudate was noted entering the stomach. A Dobhoff tube (DHT) was placed and appropriate antibiotics started. Surgical consult was requested for button removal. At surgery the button was located in the subcutaneous tissue was removed and a 30cc abscess pocket was drained. Cultures grew out Klebsiella Pneumoniae and Enterococcus. After drainage and antibiotic treatment the infected tract closed gradually over the next month.

One month later, a new Ponsky PEG was placed without problems. It was rechecked a week later and the patient had not experienced any difficulties.

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Discussion

Since the introduction of the button¹ in 1984, there have been few reported complications. Most of the major complications occurred during placement.² There are two reports of migration with subsequent obstruction, both relieved endoscopically.^{3,4} There have been other minor complications described by Gauderer⁵ and Foutch.⁶ To our knowledge this is the first reported major complication from a long-term button.

There are several issues in this case which need to be mentioned. The patient had been colonized by MRSA for two years without problems. This and the Klebsiella and Enterococcal organisms previously found in the patient's urine probably infected the closing PEG track. Continued attempts at feeding through the PEG site allowed collection of Ensure within the abdominal wall potentiating abscess formation. Secondly, although the patient had documented recurrent cancer, his overall condition remained stable and he had received no recent chemotherapy or radiation treatment to alter his immune defenses markedly.

This case report stresses several key points for continuing PEG/Button follow-up, as well as instruction for signs of infection and other PEG complications. Despite early antibiotics, infections may develop and close supervision in all patients with early signs of possible infection is necessary. Another important point may be the interruption of tube feeds until the infection is controlled. This may mean admitting the patient into the hospital for total parenteral nutrition. Certainly appropriate antibiotics as well as cultures should be obtained. As in this patient, a knowledge of previous infections may affect one choice of initial antibiotic. In conclusion, this case illustrates a late term complication of a button. Aggressive therapy and close follow-up is necessary to prevent major late infectious complications.

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Medicine in the News

Health Care Access Foundation

As of October 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,669 medically indigent persons, received 21,982 applications and enrolled 42,877 persons. This program has 1,739 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

AMS Adopts Policy Prohibiting Society Funds to be Invested in Tobacco Related Stocks, Bonds or Mutual Funds

Following the lead of the AMA, the Council of the AMS has adopted a policy prohibiting the investment of any Society funds in stocks, bonds or mutual funds which have any connection to the tobacco industry. This would include any funds of the AMS or any of its subsidiaries and foundations. The AMA has compiled a list of 13 stocks and 1,474 mutual funds that include companies that manufacture or invest in tobacco companies. The AMS Council strongly encourages all AMS members to consider similar action with their personal and business investment portfolios.

All of this came from the August 25, 1996, AMS Council Meeting, where after Ken LaMastus discussed the information received from Boatmen's Trust Company regarding investment of all tobacco related stocks, bonds and mutual funds, the Council approved the following motions submitted by Dr. William Jones:

The AMS Council send a letter of commendation to the President of the United States, Bill Clinton, and the Commissioner of the Food and Drug Administration, David Kessler, for their leadership roles in the fight to reduce teenage use of tobacco products and the recognition of nicotine as an addictive drug contained in tobacco that is responsible for the premature death of over 400,000 United States citizens each year and that copies of these letters be forwarded to the Board of Trustees of the AMA.

The AMS Council instruct the Budget Committee to carry out the divestment of tobacco related stocks, bonds, and mutual funds contained in the portfolio of the AMS, the AMS Pension Plan and MEFFA with due consideration to the suggestions outlined in the August 1, 1996, letter from Boatmen's Vice President Pat D. Moon.

Any future investments of the AMS controlled funds exclude the purchase of any tobacco related stocks, bonds or mutual funds. The tobacco investment action taken be reported to the AMA Board of

Trustees and the American Medical News. These actions shall be reported to the AMS membership in the next newsletter and in a future publication of *The Journal of the Arkansas Medical Society* and the report shall indicate the AMS Council's encouragement of the membership to take similar action in regard to their individual investment portfolios.

Important Changes in Antitrust Enforcement Policy for Physician Networks

On August 28, 1996, the U.S. Department of Justice (DOJ) and the Federal Trade Commission issued their Statements of Antitrust Enforcement Policy in Health Care (the "new guidelines"). The new guidelines revise older guidelines (the "old guidelines") by removing barriers to the formation of physician sponsored health care delivery networks.

The Problems with the Old Guidelines

There were two major problems with the old guidelines. First, they limited physician networks to those where the physicians assume substantial financial risk similar to insurance risk, including capitation and substantial fee withhold arrangements. Such networks require large amounts of capital to organize and skill in managing insurance risk, which many physicians do not have. Further, most states require that networks contracting with self-insured employers obtain an insurance license, which requires substantial capital and creates other problems for networks. Some states even require a license when they contract with HMOs. Second, they limited the size of physician networks, which made it difficult for them to be competitive with networks organized by non-physicians. Patients want a wide choice of physicians available, and it is difficult to offer choice in a small network. This restriction may have been more apparent than real, but it discouraged the formation of networks.

Key Features of the New Guidelines

The new guidelines substantially resolve these problems by expanding the options available to physicians. These changes will benefit physicians in all kinds of practice settings. For example: *Physicians in solo or small group practice without access to substantial capital and management resources will be able to get started in managed care by organizing fee for service networks. *Large group practices and medical faculty practice plans that wish to expand their service and geographic coverage by contracting with independent physicians, IPAs, or other group practices will be able

to offer a wider array of products to managed care plans and self insured employers. For example, they will be able to offer fee for service PPO products as well as capitated HMO products, and they will be able to engage in direct contracting with self insured employers without triggering insurance regulations.

Fee for Service Networks May Be Organized

The new guidelines have two features which make it possible for physicians to organize fee for service networks that are legal and which can serve self-insured employers and other customers. They include:

Fee for Service Networks with Clinical and Functional Integration. Networks where the physicians are paid on a fee for service basis by payors according to a fee schedule that the physicians have agreed on, are now legal provided that there is adequate clinical and functional integration of the physicians in the network. Such integration may consist of an active and ongoing program to evaluate and modify practice patterns by the network's physicians and create a high degree of interdependence and cooperation among the physicians to control costs and assure quality. This can be shown by:

*Establishing mechanisms to monitor and control utilization of health care services that are designed to control costs and assure quality of care;

*Selectively choosing network physicians who are likely to further these efficiency objectives; and

*The significant investment of capital, both monetary and human, in the necessary infrastructure and capability to realize the claimed efficiencies.

These networks do not qualify for a safety zone, but are clearly legal if properly organized. Other forms of integration where agreements on price are reasonably necessary to achieve the integration also may be legal.

Safety Zone for Fee for Service Networks Featuring Substantial Financial Rewards or Penalties Based on Utilization. A fee for service network is legal if the member physicians will receive a substantial reward if utilization goals are met OR a substantial penalty if such goals are not met. It is not clear whether the network must be subject to both a reward and a penalty or if it is adequate if one or the other is in place. The AMA believes that a reward only is sufficient if the reward is substantial enough to motivate physicians to attain it.

This allows fee for service networks to enter arrangements where they are rewarded for controlling utilization without assuming insurance risk. It enables them to engage in direct contracting arrangements with employers where they are rewarded for achieving savings without being engaged in the business of insurance.

Networks Can Be Larger than Safety Zone Size Limits

Under the old guidelines, physician networks had to fall within size limits to qualify for a safety zone. Exclusive networks, meaning networks where the physicians agree to deal with health plans only through the network and not to participate in any other net-

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work, were limited to no more than 20% of the physicians in any given specialty in a market. Nonexclusive networks, meaning networks where physicians were free to deal independently with health plans or to participate in other networks, were limited to no more than 30% of the physicians. Some physicians were advised that they should not organize networks larger than the safety zone limits if they wanted to avoid the risk of antitrust prosecution.

The new guidelines do not change the safety zone size limits. However, they clarify that networks can be substantially larger than the limits, and they also provide guidance about when larger networks are legal. The clarification says (at pg. 63 of the new guidelines): "The agencies emphasize that merely because a physician network joint venture does not come within a safety zone in no way indicates that it is unlawful under the antitrust laws. On the contrary, such arrangements may be procompetitive and lawful, and many such arrangements have received favorable business review letters or advisory opinions from the agencies."

The clarification refers to opinions of the DOJ and FTC where networks as large as 50% of the providers involved were approved. With regard to when larger networks may be legal, the new guidelines describe two scenarios. First, the new guidelines recognize that nonexclusive networks in competitive markets are unlikely to be in violation of the antitrust laws. In this regard, the new guidelines say (at pg. 78):

"If, in the relevant market, there are many other networks or many physicians who would be available to form competing networks or to contract directly with health plans, it is unlikely that the joint venture would raise significant competitive concerns."

Second, the new guidelines say that if different physicians in a network have different incentives, then a large network is unlikely to raise concerns. For example, if a network has a core group of physicians that have invested substantial amounts in the network and have an interest in seeing the network succeed as a business, those physicians have a different interest than other physicians with whom they contract to fill out the network. The owner physicians have an incentive to control the costs to the network of the subcontracting physicians. This would be the case when a large group practice contracts with independent physicians to expand the services it can offer or its geographic coverage.

The AMA believes that it is possible for physician networks to have 50% or even more of the physicians in a specialty in competitive markets where there are many physicians that would be available to form competing networks or many other networks, or if there is a divergence of economic interests among the physicians in a network.

Networks That Negotiate Risk and Fee for Service Arrangements Under the old guidelines, physician networks that accepted insurance risk through capitation arrangements were not allowed to negotiate with the same payors over fee for service arrangements. Therefore, if a payor wanted the same network to serve its HMO product and its PPO product, the network could negotiate capitation arrangements with the payor for the HMO product but could not negotiate fee for service arrangements for the PPO product. Under the new guidelines, the network can negotiate both types of arrangements. However, the management tools, such as utilization review programs, used by the network to control costs and assure quality must be applied to both types of arrangements.

More Kinds of Risk Are Included in the Definition of Substantial Risk

In addition to the fee for service arrangements discussed above, the new guidelines expand the number of arrangements that fall within the definition of substantial risk. Networks whose members share substantial risk and fall within safety zone size limits (20% of physicians in any specialty for exclusive networks and 30% for nonexclusive networks) qualify for safety zones. The new kinds of risk included include (a) percentage or premium arrangements, (b) global fees, and the (c) use of utilization targets with substantial rewards or penalties (the latter arrangement is discussed above in connection with fee for service arrangements).

A More Efficient Messenger Model

Networks where the physicians wish to operate on a fee for service basis, but which do not have adequate clinical and functional integration to be legal, may operate provided that the physicians use the messenger model to arrive at fee arrangements with payors instead of collectively negotiating a fee schedule. The messenger model was available under the old guidelines but was cumbersome and inefficient to use. The new guidelines allow the messenger model to be much more efficient.

The messenger model is designed to allow the physicians in the network to arrive at a fee schedule with payors without the physicians agreeing among themselves about what fee schedules they will accept. This is done by having a messenger manage a process whereby each of the physicians in the network arrive at individual agreements with the payor, as opposed to having a representative of the physicians negotiate a fee schedule on behalf of all of the physicians.

Under the process in the old guidelines, the messenger communicates with each physician individually about what fee range the physician is willing to accept, then aggregates the information without shar-

ing it with the physicians, and then presents the information to payors. Any payor may then make an offer to the physicians in the network, and the messenger relays that offer to the physicians. Each physician then makes a unilateral decision about whether to accept the offer -- the messenger may not tell any physician about whether other physicians will accept the offer, and cannot influence the physician's decision about whether to accept it.

The new guidelines add the following features to the messenger model:

* Each physician may give the messenger authority to accept contracts from payors that are within the limits of a free range that the physician is willing to accept.

* The messenger may develop a schedule showing what percentage of physicians in the network would accept offers at various fee levels.

* The messenger may accept the offer on behalf of any physician who has given the messenger authority to accept offers within the fee range offered by the payor. The messenger may also accept offers on behalf of any physician that are better than any offer previously accepted by that physician.

* The messenger may provide objective information to physicians in the network about a contract offer made by a payor, such as the meaning of terms and how the offer compares to offers made by other payors.

Business Review Letters and Advisory Opinions

The new guidelines continue a procedure that enables physicians to obtain opinions from the DOJ or FTC about the legality of specific network proposals before they are organized. The agencies have committed to respond to requests for opinions within 90 days of the receipt of all relevant information.

Conclusion

The new guidelines include other positive features as well. They provide a rich source of tools for physicians to form different kinds of networks, and there are now many options open to physicians to meet the needs of their markets in a realistic and practical fashion. Because of the complexity of the guidelines, physicians should be aided by experienced counsel as they develop networks.

***Physician Biographical Information Now on AMA Web Site - <http://www.ama-assn.org>
All 650,000 U.S. physician biographies up on the Internet***

For every year he has been in practice, gastroen-

terologist Richard Corlin, M.D., has paid up to \$8,400 annually for a simple listing in the Yellow Pages with his name, address and phone number. Today, Dr. Corlin has his entire medical biography up on the AMA's Internet Web site, at no cost.

AMA's new program, AMA Health Insight, contains both the new patients' medical "Reference Library" and a new physician information database called "AMA Physician Select."

The AMA database, the most comprehensive listing of all U.S. physicians, lists a physician's education, residencies, board certification and other significant biographical information available. Patients can search the database by physician name, location or specialty.

"Patients can now pop-up on the Internet or head to the public library and find a biography on their physician in a matter of seconds," said Richard Corlin, MD., speaker of the AMA House of Delegates. "You also can search your town by specialty and find a list of all the licensed physicians in the area. This is a great tool for members of the public seeking the best physicians for themselves and their families."

AMA Physician Select

Although many local medical societies offer similar on-line search services listing member physicians, AMA Physician Select is the first nationwide database of all licensed physicians available to the public. Searches can be conducted by 23 major specialties and 150 subspecialties, and by city, zip code, state or by name. AMA Physician Select provides the physician's name, address, phone number, gender, medical school, all residency and internship information, specialty board certification and AMA membership.

AMA Patient Reference Library

The AMA Patient Reference Library contains information about the AMA and the medical profession and a link to information and resources on diseases, such as the JAMA/HIV AIDS Information Center. The HIV Center features clinical updates, daily news and information on social and policy questions related to AIDS, under the direction of JAMA staff and an editorial board of leading HIV/AIDS authorities.

AMA Members Receive "Expanded Web Site"

All AMA members are offered an "expanded web page site" to list additional practice information, including practice philosophy, health plans accepted, hospital privileges, group practice affiliations, personal information, practice hours, and even a photo. All AMA members are also identified in the database by the AMA logo, as are recipients of the AMA Physician's Recognition Award for continuing medical education.

"We expect 30 to 50 percent of patients to use the Internet at home or in local libraries to find out more about their physicians," said Corlin. "The expanded web pages are much more than a yellow page ad. It's like a brochure placed in the hands of thousands of potential patients."

Only AMA members are eligible for the "expanded web page" listing, although AMA's Corlin jokes that any potential AMA member can purchase an expanded web page for \$425 -- the price of AMA membership. "They can get the expanded web page and all the other benefits of membership for \$425 annually, less than the monthly cost of that Yellow Page ad."

The AMA launched its award-winning site on the Internet in August of 1995 and includes clinical abstracts and articles from the Journal of the American Medical Association and AMA's nine specialty journals. All press releases, statistics and award-winning American Medical News summaries are on the AMA's web page, along with a data base of 7,000 approved medical residency programs for graduating medical students. In addition, all state, county and specialty medical societies with existing home pages are accessible

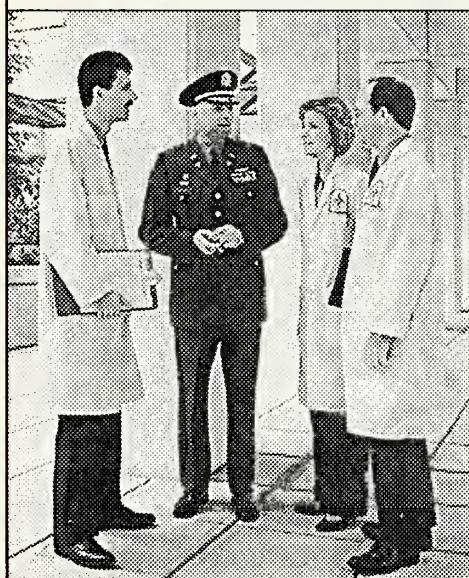
through to the AMA's web page. More than 2.5 million visits to the AMA web site were logged in the last year.

AMA has maintained a listing of all physicians licensed and educated in the United States since 1906. The AMA has opened that database to the public "to help patients weigh their options and find the best physicians for their needs," according to Corlin.

"AMA Physician Select is revolutionary. Never have patients been able to gather so much information on their physician at the click of a computer mouse," said Corlin. "Our patient Reference Library promises to do the same for all of those looking for the most up-to-date, reliable information on a broad spectrum of conditions."

The AMA database includes only actively licensed physicians. Neither will liability awards against physicians be made available, according to Corlin. "It's impossible to interpret such information," he said. "Unfortunately it can be the most skilled physicians with the sickest patients who find themselves in court, and the average obstetrician is sued twice every 10 years, regardless of professional competence."

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AMS Newsmakers

Dr. M. Carl Covey, a physician of pain medicine in Fayetteville, recently attended the 8th World Congress of the International Association for the Study of Pain in Vancouver, British Columbia.



M. Carl Covey, M.D.

Dr. Mark Landis, a family physician in Pocahontas, has made three trips to Cambodia in the past 18 months to offer medical care to the orphans. Dr. Landis, founded an organization named First Serve the Earth's People, or First S.T.E.P. The non-governmental, non-profit organization seeks to work with the Cambodian government in providing more and better care for the nation's street children.

Dr. Kerry F. Pennington, of Warren, was recently named the Arkansas Family Doctor of the Year by the Arkansas Academy of Family Physicians. He will be nominated by the Arkansas Academy for the 1997 National Family Doctor of the Year which will be presented in October 1997.

Dr. Hampton Roy, a Little Rock ophthalmologist, has written and recently published a book titled "Ocular Differential Diagnosis, 6th Edition." The book has 19 contributors from throughout the world.

Dr. Robert B. White, a Paragould internist, was recently named President of the American Heart Association's state affiliate where he has been an active member for several years.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of September 1996 are: Jeffery D. Angel, Batesville; Paul R. Neis, Mountain Home; Franklin D. Roberts, Magnolia; and Linda N. Teal, Mountain Home.

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New Member Profile

Mark Michael Allard, M.D.

PROFESSIONAL INFORMATION

Specialty: Orthopaedic Surgery

Years in Practice: A little over three months

Office: Siloam Springs

Medical School: UAMS, 1991

Internship/Residency: UAMS, 1992/1996

Honors/Awards: Alpha Omega Alpha Medical Honor Society

Member and in Spring of 1996 was voted Outstanding Chief Resident

Teacher by UAMS Department of Orthopaedic Surgery



PERSONAL INFORMATION

Spouse: Julie

Children: Son, Michael, 2 years old and daughter, Grace, 11 months old

Date/Place of Birth: September 1, 1964, in Chicago, Illinois

Hobbies: Golf, bass fishing, softball, reading John Grisham novels

THOUGHTS & OTHER INFORMATION

Worst habit: Being late

Best habit: Staying in a good mood

Favorite junk food: Little Debbie's

Most valued material possession: Our new home

The turning point of my life was when: I met my wife

Nobody knows I: Quit chewing tobacco three years ago

Favorite vacation spot: Lucerne, Switzerland

One goal I haven't achieved yet: Bogey golf

One goal I am proud to have reached: Fatherhood

Favorite Childhood Memory: Summer vacations driving cross-country

When I was a child, I wanted to grow up to be: A football player or an orthopaedic surgeon

One of my pet peeves: Snobs

First job: Newspaper carrier (age 12)

Worst job: Weekend janitor at my college dorm

One word to sum me up: Optimistic

My life philosophy: Work hard, take good care of my family and my patients, and good things will happen.

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Anaphylaxis: Multiple Etiologies - Focused Therapy

John M. James, M.D.*

Abstract

Anaphylactic reactions are severe, generalized clinical reactions. They can occur with or without warning, progress rapidly from isolated to systemic symptoms, and may in some cases result in death. Estimates in the United States have projected that anaphylaxis can occur in approximately one in every 3000 hospitalized patients, and may be responsible for more than 500 deaths annually. This review will present information related to the epidemiology, pathophysiology, diagnosis and treatment of anaphylactic reactions. In addition, key prevention measures will be discussed.

Introduction

The term anaphylaxis actually means "backward protection." This word has its origins from the Greek: ana = backward, and phylaxis = protection. Portier and Richet introduced the term in 1902 to describe a paradoxical clinical observation occurring with an experimental protocol immunizing dogs against a toxin derived from the sea anemone. An increased sensitivity and even death was observed when these animals were subsequently injected with smaller doses of the toxin. For these initial landmark scientific investigations regarding anaphylaxis, Richet was eventually awarded the Nobel Prize in Medicine.

Classically, anaphylaxis represents a rapid, generalized, and often unanticipated immune-mediated event that occurs after exposure to certain foreign substances in previously sensitized persons.¹ This systemic reaction can affect virtually any organ in the body, but most commonly involves the following systems: cutaneous, gastrointestinal, pulmonary, circulatory, and neurological. In contrast, anaphylactoid reactions represent a clinically indistinguishable syndrome from anaphylaxis that are not mediated by IgE antibody. These reactions do not necessarily require a previous exposure to the inciting substance. This review will

focus on the epidemiology, pathophysiology, clinical features, diagnosis, treatment and prevention of anaphylaxis. Unless stated otherwise, specific information in this review will directly relate to anaphylaxis, unless a particular anaphylactoid reaction needs to be highlighted.

Epidemiology

A recent review article highlighted the epidemiology of anaphylactic reactions.¹ While there are no reliable prospective data in this area, the incidence of anaphylaxis does appear to be increasing. Rising environmental exposures may be responsible for this trend. As stated above, estimates in the United States have proposed that anaphylaxis can occur in as many as 1 in every 3000 hospitalized patients, and be responsible for hundreds of deaths annually. Rates of anaphylaxis appear to be similar in patients with and without atopic (allergic) histories. Age, gender, race, occupational and geographic factors do not appear to predispose an individual to anaphylaxis. Patients with asthma, however, do appear to be more susceptible to life-threatening complications from anaphylactic reactions.

Of the common causes of anaphylaxis, penicillins are responsible for approximately 1 case per 10,000 administrations and anaphylaxis following insect stings affect 0.4-1% of the general population. As many as 40-50 deaths per year occur in the United States as a result of insect sting-induced anaphylaxis. In terms of anaphylactoid reactions, radiocontrast agents are responsible for approximately 1 case per 5000 exposures. Recurrence risks of anaphylaxis and anaphylactoid reactions have been examined with the following results: penicillins: 10-20%, insect stings: 40-60%, and radiocontrast agents: 20-40%.

In 1989, Sorensen published a retrospective review of 20 cases of anaphylactic shock occurring outside of a well-defined hospital referral area in Europe.² There were 3.2 cases per 100,000 inhabitants per year with an estimated mortality of 5%. The identified precipitating agents were as follows: antimicrobials (50%) in-

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cluding penicillins and sulfa drugs, insect stings (40%) and foods (10%). In terms of anaphylactic shock occurring within a hospital setting, a drug surveillance program reported 3 reactions per 10,000 patients.³ Specific incidence rates were determined as follows: penicillins 15-40 reactions per 10,000 patients, radiocontrast media one reaction per 600 patients, blood products one reaction per 400 patients and anesthetics one reaction per 20,000 patient exposures.

Potential Mechanisms

Certain pathophysiological events provide the foundation for the clinical signs and symptoms observed during anaphylactic reactions.¹ Most importantly, activation of mast cells is the central pathophysiological event underlying these reactions. These cells are located in multiple sites throughout the body, especially in places where clinical symptoms of anaphylaxis are observed including the skin, the gastrointestinal tract, and respiratory system. A variety of mast cell mediators, both pre-formed and newly-generated, have been identified and are responsible for the vasodilatation, vascular permeability, mucus secretion and bronchospasm typically involved in an anaphylactic reaction. Following mast cell activation, the cell's granules coalescence, migrate to the cell membrane surface and their contents are released into the circulation to be distributed to various organ systems. These mediators give rise to the specific clinical symptoms observed during anaphylaxis.

As mentioned above, there are both pre-formed and newly synthesized mast cell mediators (Table I).¹⁻⁵ Of the preformed mast cell mediators, histamine is the most well known. Tryptase is another pre-formed mediator that has generated interest over the past ten years.⁴ This proteinase is specific to mast cells and is not found in basophils or eosinophils that may participate in allergic inflammation. Tryptase has a prolonged presence in the peripheral blood circulation with a half-life of many hours, as opposed a half-life of minutes for histamine. Finally, tryptase can be measured by an immunoassay. Therefore, tryptase has been proposed as a marker of mast cell activation and can be used in the laboratory evaluation of suspected anaphylactic reactions.⁴ Chymase, heparin, and chondroitin sulfate are other preformed mast cell mediators involved in anaphylactic reactions. Again, all of these preformed mast cell mediators reside in mast cell granules and can be released immediately upon activation of this cell. These mediators are largely responsible for the immediate symptoms of anaphylaxis including vasodilatation, edema, mucous secretions, and bronchospasm.

In contrast, there are newly-synthesized mast cell

Table I:
Mediators of Anaphylactic Reactions

<u>Preformed mast cell mediators</u>
Histamine
Tryptase
Chymase
Heparin
Chondroitin sulfate

<u>Newly-generated mast cell mediators</u>
Prostaglandins
Leukotrienes
Platelet activating factor

mediators that are important to the pathophysiological process of anaphylaxis (Table I).¹⁻⁵ Prostaglandins, leukotrienes and platelet activating factor are examples of mediators in this group. Because these mediators need to be actively generated, they most likely propagate the anaphylactic episode and the late phase allergic reaction.

Several major mechanisms have been proposed for anaphylaxis (Table II). First and foremost, IgE-mediated reactions have been shown to be a mechanism for mast cell activation and subsequent anaphylaxis.¹ Susceptible atopic individuals form specific IgE antibodies to potential allergens. These IgE antibodies bind to high affinity receptors on the surface of tissue mast cells located in a variety of organs including the skin, intestinal tract, lung. Subsequent exposure to the responsible allergen (e.g. hymenoptera venoms, antimicrobials, foods) results in release of the specific mediators of anaphylaxis. These mediators initiate and propagate the anaphylactic reaction.

Activation of the complement cascade is another potential mechanism resulting in anaphylaxis.¹ Certain biological proteins (e.g. immune complexes, human proteins) and dialysis membranes can generate specific complement proteins, which have been designated anaphylatoxins, that bind complement receptors on the mast cell surface. This results in activation of the mast cell and the release of mediators of anaphylaxis mentioned above.

Another mechanism of anaphylaxis involves the direct activation of mast cells.¹ This process is independent of IgE antibodies or the complement cascade and is traditionally labeled as an anaphylactoid reaction. Hyperosmolar solutions such as radiocontrast dyes and vancomycin are the best examples of agents that directly activate mast cells. Finally, there are other undefined or idiopathic mechanisms of mast cell activation that result in anaphylaxis. Aspirin, and exercise-induced anaphylaxis are included in this category.

Table II: Mechanisms of Anaphylaxis

<u>Reaction Mechanism</u>	<u>Agents</u>	<u>Examples</u>
IgE-mediated:	venoms antibiotics foods latex	Hymenoptera penicillins, sulfas peanut, egg, milk, seafood, tree nuts catheters, surgical gloves
Complement activation and anaphylatoxins:	human proteins dialysis	gamma globulin, insulin dialysis membranes
Direct activation of mast cells:	hypertonic solutions drugs	radiocontrast dyes vancomycin
Undefined or Idiopathic:	NSAID* anesthetics exercise	aspirin, indomethacin lidocaine

*non-steroidal anti-inflammatory drugs

Clinical Signs and Symptoms

Because anaphylaxis is a generalized reaction, a wide variety of clinical signs and symptoms may be observed.^{1,5} The most common symptoms involve the skin including: urticaria, angioedema and pruritus with or without a specific skin rash. Another common system involved is the gastrointestinal system including: nausea, vomiting, abdominal cramping and diarrhea. Common respiratory symptoms include: rhinitis, tearing, sneezing, laryngoeedema, stridor, dyspnea, cough and wheezing. Finally, specific cardiovascular symptoms are typically manifested by dizziness, hypotension and syncope. Rarely, seizures have been observed during anaphylaxis.

Urticaria and angioedema are the most common reported clinical findings in up to 88% of cases of anaphylaxis.⁵ Respiratory symptoms are also very common as noted in approximately 50% of patients. Cardiovascular and gastrointestinal symptoms are the next two most common systems involved in at least one-third of the patients. Other symptoms such as headaches, pruritus without a skin rash, and seizures are observed in a minority of patients. In summary, generalized symptoms involving the skin, gastrointestinal tract, lungs and cardiovascular system are the most helpful clinical indicators of a possible anaphylactic reaction.

On a more serious note, anaphylaxis may in some instances be responsible for fatalities. An article from the *Journal of Forensic Science* reviewed 43 fatalities from anaphylaxis occurring over a 15 year period.⁶ Eighty-six percent of the cases had a very rapid symptom onset, which typically occurred within 20 minutes, and 51% of the patients died within one hour of the initial presenting symptoms. The authors emphasized that there were key clinical findings, such as respiratory and cardiovascular symptoms, in the fatalities from anaphylaxis. Finally, postmortem examinations revealed common respiratory tract pathology including airway edema and obstruction, as well as hemorrhage into the airways.

Specific Agent of Anaphylaxis

A multitude of different agents have been implicated in anaphylactic reactions (Table II).^{1,5} Among these agents, antibiotics, such as

penicillin, are frequently the cause of anaphylaxis and these reactions are the result of IgE-mediated sensitivity. Most health care providers are familiar with penicillin allergy and have observed these reaction in their clinical practice. The parenteral route is more immunogenic than the oral route, but all routes of administration can ultimately lead to anaphylaxis. There appears to be an increased severity of reactions, however, in patients who are on beta blockers. The reason for this is that if these patients develop respiratory symptoms, they are more difficult to manage. Finally, approximately 10% of penicillin-induced anaphylaxis are fatal with an estimated 400-800 deaths occurring annually in the United States.

Hypersensitivity reactions to venom from insects in the hymenoptera order are another major cause of IgE-mediated anaphylactic reactions.⁵ The earliest case of anaphylaxis was thought to have been recorded in ancient Egypt in the year 2060 B.C. A pharaoh was depicted in hieroglyphics as having died from a wasp sting. A recent review noted that insect venom allergy is probably the most common cause for anaphylactic reactions.¹ The insects in the hymenoptera order include honey bees, wasp, yellow-jackets, hornets and fire ants. Of these, the honey bee will typically leave a stinger at the injection site, providing a clue as to the identity of the offending insect. While approximately

3% of the general population is sensitized to insect venom, only 0.4 to 1% of the population will experience an generalized anaphylactic reaction following an insect sting. There are approximately 40-50 deaths per year in the United States from insect sting anaphylaxis. Therefore, this can be a very serious clinical problem if not properly treated and prevented.

One study reviewing a large group of fatalities following insect stings has been highlighted.⁵ This was a retrospective review of 50 fatalities and 100 non-fatal cases. The symptom onset was typically less than 30 minutes from the sting. Over 50% of the victims died within the first hour of the sting. The major sites of pathology included the respiratory tract, cardiovascular, and neurological systems. The timely administration of epinephrine appeared to be a crucial management factor preventing patients from developing fatal anaphylaxis.

Foods are another major cause for IgE-mediated anaphylaxis.⁵ For example, peanuts are notorious for not only being a major cause of these reactions, but allergic sensitivity to this food is typically life-long. Tree nuts, shellfish, cow milk and eggs are other common food allergens that can precipitate anaphylaxis. A recent review of the literature identified several features related to food-induced anaphylaxis.⁵ These reactions usually occur in individuals with previous histories of atopic diseases such as atopic dermatitis, allergic rhinitis, and asthma. The onset of symptoms are typically within 30 minutes following food ingestion. Interestingly, asthmatics may be more susceptible to life-threatening reactions, because these patients develop respiratory symptoms that are more difficult to manage during the actual anaphylactic event.

As previously mentioned, deaths following food-induced anaphylaxis can occur. Two retrospective studies have been reviewed, one from the Mayo Clinic and one from Johns Hopkins Hospital.⁵ Over a short observation period, these two centers identified 13 fatalities and 7 near-fatal cases from their respective referral areas. Common features have been identified from these two investigations. Prior histories of anaphylaxis to the incriminated food were present in these patients indicating a prior knowledge of allergic reactions following food ingestion. The ingestion of the food was typically in an accidental fashion, suggesting the food allergen was hidden in the ingested food. Moreover, the patients were typically away from home, either in a day care, school setting or at a picnic, when the anaphylactic episodes occurred. Most importantly, the patients who had fatalities lacked the immediate use of epinephrine to manage the anaphylactic reaction.

Allergen immunotherapy and skin testing with allergen extracts are another cause of IgE-mediated

anaphylaxis. Several published reports from 1973 to present have examined this issue.⁷ These investigations have identified six deaths following allergen skin testing. Of these deaths, five patients died following intradermal skin testing before they were subjected to any other method of skin testing. Typically, patients undergo epicutaneous or skin prick skin testing before intradermal testing is performed. Fifty-one deaths from allergen immunotherapy or "allergy shots" have been identified from 1973 to present.⁷ These reactions typically onset within 30 minutes. Key risk factors have been identified including errors in using the wrong immunotherapy extract bottle, which may contain an inappropriate concentration, or a new immunotherapy vial that has recently been re-formulated. Patients receiving immunotherapy with symptomatic asthma, as well as patients on beta blockers are considered patients at higher risk for developing anaphylaxis after immunotherapy injections. These patients may experience more severe anaphylactic reactions with difficult to manage respiratory symptoms. The American Academy of Allergy, Asthma and Immunology has provided recommendations reinforcing that patients receiving immunotherapy should receive these shots in the clinical setting, not at home, where the patient can be treated immediately for anaphylaxis if necessary. In addition, this statement recommends obtaining peak flow measurements before and after immunotherapy in patients with asthma. These recommendations should ensure that patients with asthma are not in a symptomatic phase of their disease before immunotherapy injections are administered.

There has been a recent interest in latex and latex-containing products as a new agent causing IgE-mediated anaphylactic reactions.⁵ Latex is commonly found in commercial brands of surgical gloves, some forms of IV tubing, penrose drains, certain nipples for infant bottles, and stoppers on some pharmaceutical bottles. A recent review highlighted anaphylactic reactions to latex and latex-containing products.⁸ The allergen in latex comes from a plant product derived from the rubber tree, *Hevea brasiliensis*. The common risk factors for sensitization to latex include the following: frequent use of latex-containing products, patients with prior or current hand dermatitis especially while wearing latex-containing gloves, and the presence of a prior atopic disease (e.g. allergic rhinitis, atopic dermatitis). Moreover, patients with myelodysplasia or spina bifida constitute an unique subset of patients that have been shown to have sensitization to latex. Up to one-third of these patients may become sensitized, most likely because of their frequent exposure to these products in the form of urinary catheters, neurosurgical shunting tubing, and frequent exposures to latex during surgical procedures. Estimates of 6-10% of hospital personnel have been found

to be sensitized to latex and a significant percentage of these individuals will have allergic symptoms including generalized anaphylaxis upon subsequent exposures to latex. For these reasons, many hospitals have developed specific policies for latex-allergic individuals. The aims of these policies are to prevent sensitization, exposure and ultimately allergic reactions to latex.

The intravenous administration of immune gamma globulin and plasma products, as well as certain dialysis membranes are agents that may activate the complement system.⁵ This activation leads to the generation of specific complement proteins that bind to receptors on the mast cell surface, activate this cell, and may in some cases lead to anaphylaxis.

Several agents can directly activate the mast cell and precipitate anaphylactoid reactions.⁵ Again, these reactions are not mediated by specific IgE antibodies. Hyperosmolar solutions, mainly radiocontrast dyes and mannitol, are the best examples. In addition, opiates, Vancomycin, and muscle depolarizing drugs (e.g. succinylcholine) would also be included here. A recent publication reviewed a large group of reactions of radiocontrast dye and found that the reactions are typically unpredictable and independent of the dose that is administered.⁵ As mentioned previously, the exact cause for these reactions is unknown. The use of contrast agents with lower osmolality appeared to decrease the future risk anaphylaxis when these patients needed radiocontrast dye. Finally, pre-treatment of these patients with antihistamines and even steroids have been shown in some cases to prevent future reactions with radiocontrast dye.

Anaphylactic reactions to aspirin and non-steroidal anti-inflammatory drugs occur secondary to a presumed abnormality of arachidonic acid metabolism.⁵ Some investigators have proposed that this metabolic abnormality may generate haptens that bind to serum proteins. These complexes ultimately trigger an anaphylactic reaction upon future exposure to these agents. This proposed mechanisms needs to be confirmed in future investigations. Patients experiencing these reactions are otherwise normal and non-atopic, and they characteristically react to only one non-steroidal or aspirin-containing product. Occasionally, these patients will cross-react to a multiple drugs in this class, but usually an alternative drug out of this group can be administered without adverse clinical effects.

Finally, there are anaphylactic episodes for which the specific etiology remains unknown.^{1,5} Idiopathic anaphylaxis typically involves patients in their teens or early 20's who have recurrent episodes of anaphylaxis with undefined etiologies. These reactions are typically recurrent with a high risk of having similar episodes in the future. These patients are usually treated with prophylactic antihistamines and/or steroids to prevent future episodes. Exercise-induced

anaphylaxis has been described in the literature as well as food-dependent exercise-induced anaphylaxis. In the food-dependent form, the patients have to have both of these events together to experience an anaphylactic episode. A severe form of cholinergic urticaria can present with anaphylaxis. Dr. Virant recently reviewed and compared a variety of episodes of anaphylaxis with unknown causes. First, cholinergic urticaria, which usually involves an isolated rash with small pin-point hives in a discrete distribution on the body, can proceed to anaphylaxis. These patients can experience wheezing, but they rarely develop hypotension. Episodes are triggered by events that lead to a rise in the core body temperature such as exposure to heat, stress, exercise and anxiety. In contrast exercise-induced anaphylaxis typically presents with a much larger urticarial rash following exercise. Stridor, laryngoeedema, and hypotension are common clinical findings in this condition.

Diagnosis

The medical history remains the most important clinical routine in the work-up of anaphylactic reactions.^{1,5} The major goal of the history is to establish a temporal association between a suspected etiologic agent and the actual clinical episode of anaphylaxis. The history should search for an association of typical signs and symptoms (e.g. cutaneous, gastrointestinal, respiratory and cardiovascular symptoms) with the exposure to a suspected agent(s). Remember that anaphylaxis is a generalized reaction and multiple presenting symptoms are common. Moreover, the onset and reproducibility of the specific symptoms should be noted. In terms of the laboratory confirmation of these reactions, there are few things to pursue. While no serological tests accurately confirm anaphylaxis, a few studies can be useful in the work-up. Skin testing or blood (RAST) testing for allergens can, in some instances, be useful. Properly performed skin prick testing for a particular agent responsible for IgE-mediated reactions such as penicillin, insect venom and foods can be helpful in the diagnosis. Skin testing for allergens, however, should not be performed if the patient has a severe convincing history of anaphylaxis to a given allergen. In addition, clinical challenges under direct medical supervision can be performed in certain situations, but they are typically performed in research settings.⁵ These should be performed in a setting where anaphylaxis can be managed immediately if it occurs. Finally, serological markers for anaphylaxis have recently been proposed.⁴ Serum tryptase levels can be determined by immunoassays.

Because this mast cell protease has a long half-life in the serum, its elevation in a clinical setting suggestive of anaphylaxis can be useful in the confirmation of this reaction.

Table III:
Differential Diagnosis of Anaphylaxis and Anaphylactoid Reactions

- A. Acute respiratory decompensation
 - 1. severe asthma attacks
 - 2. foreign body aspiration with obstruction
 - 3. pulmonary embolism
 - 4. hereditary angioedema

- B. Loss of consciousness
 - 1. vasovagal syncope
 - 2. seizure disorders
 - 3. myocardial infarctions and/or arrhythmias

- C. Disorders resembling anaphylaxis
 - 1. systemic mastocytosis
 - 2. carcinoid syndrome
 - 3. restaurant syndrome (monosodium glutamate)

- D. Non-organic diseases
 - 1. panic attacks
 - 2. vocal cord dysfunction
 - 3. Munchausen's syndrome

Differential Diagnosis

The differential diagnosis of anaphylaxis includes a variety of clinical conditions (Table III).^{1,5} Acute respiratory decompensation from severe asthma attacks, foreign body aspiration with obstruction, and pulmonary embolism can present with respiratory symptoms suggestive of anaphylaxis. Hereditary angioedema usually presents with severe swelling of mucosal membranes, upper airway, lips and tongue, as well as gastrointestinal symptoms such as cramping and diarrhea. These patients may have a family history of hereditary angioedema, but they typically do not have pruritus and urticaria that is typically observed in allergic reactions. Syndromes that include a loss of consciousness, especially vasovagal syncope, should be considered in the differential diagnosis of anaphylaxis. This syndrome typically has a sudden onset and involves bradycardia and diaphoresis. It usually does not involve tachycardia or urticaria. Occasionally, seizure disorders, myocardial infarctions and/or arrhythmias will initially present in a similar fashion to anaphylaxis. Finally, there are a group of disorders that resemble anaphylaxis. Mastocytosis and carcinoid syndrome are both very rare disorders that can present with cutaneous symptoms resembling anaphylaxis. "Chinese restaurant" syndrome is an abnormal physiologic response of the body to monosodium glutamate, which is a common food additive.

This food intolerance reaction is often misinterpreted as an allergic or anaphylactic reaction. Finally, non-organic diseases such as panic attacks, vocal cord dysfunction and Munchausen's syndrome can, in some instances, present with symptoms resembling anaphylactic episodes.

Treatment and Prevention

The treatment and prevention of anaphylaxis should provide a comprehensive plan for the affected patient (Table IV).^{1,5} First, identifying and eliminating the offending agent responsible for anaphylactic episodes is the foundation of any successful therapy plan. Unfortunately, this is not always an easy task. If the offending agent is identified, the patient and family need to be educated about preventing future exposures. In the event an anaphylactic episode is encountered, an emergency system (#911) should be activated to transfer the patient to a health care facility, if necessary. The extent and severity of the reaction should be rapidly assessed and basic life support measures undertaken. The main focus should be on the airway, the monitoring of vital signs and systemic perfusion. In addition, the rapid and judicious use of epinephrine cannot be overemphasized for this is the cornerstone of therapy for acute anaphylaxis. Administration of epinephrine rapidly reverses the symptoms of anaphylaxis and appears to be the key to preventing fatalities.⁶ Supplying this medication in the form of pre-loaded autoinjecting syringes has been an extremely helpful to patients. These devices typically contain a single dose of epinephrine, and they can be kept at home, school, and work. Demonstrators are available to educate patients on the proper use of these devices. Other key management issues include rapid volume resuscitation if necessary. Antihistamines can be administered for the acute management of urticaria and pruritus, in some cases, for protracted cases of anaphylaxis. These medications have also been utilized as a prophylactic measure in some patients with idiopathic anaphylaxis. There are certain conditional agents that are important including vasopressors to support blood pressure, treatment of bronchospasm in patients who are having respiratory distress and glucagon infusions in patients on beta blockers who experience anaphylaxis. Glucagon appears to be very helpful in supporting the cardiovascular system in these patients and supporting them during the anaphylactic episode. Corticosteroids are not really useful in the acute management of anaphylaxis, but they may be useful in preventing the late phase allergic reaction. They can also be useful in the prevention of anaphylaxis in some patients with idiopathic anaphylaxis.

There are a variety of education materials available to patients who have experienced anaphylactic reactions.⁵ Specific pamphlets have been published

Table IV: Treatment and Prevention of Anaphylaxis

- A. General measures:
 - 1. Identify and eliminate the offending agent
 - 2. Develop plan to prevent future exposures
- B. Specific treatment measures:
 - 1. Activate emergency medical system (#911)
 - 2. Assess airway, breathing and circulation
 - 3. Transfer the patient to a health care facility
 - 4. Administer initial medications as indicated:
 - a. epinephrine: 0.2-0.5 cc of 1:1000 dilution, SQ
 - b. antihistamines: 12.5-25 mg IM or orally
 - c. oxygen: 40-100%
 - d. albuterol: 0.3 cc (0.5% solution) in 2.5 cc saline inhaled through nebulizer
 - e. intravenous volume resuscitation
 - 5. Administer secondary therapy as indicated:
 - a. corticosteroids
 - b. antihistamines
 - c. pressors
 - d. glucagon infusion
- C. Education of patient and family
 - 1. Use of epinephrine auto-injectors
 - 2. Medic alert bracelets
 - 3. Desensitization, if available
 - 4. Outlined treatment plan for family/caregivers

about anaphylaxis in general, as well as specific agents responsible for these reactions (e.g. food allergens, insect venom, drugs and latex). These educational materials should be provided to the patient and should supplement the outlined treatment and prevention plan. Medic alert bracelets can be helpful in some cases.

A few key observation guidelines regarding patients experiencing anaphylactic reactions need to be discussed. Patients experiencing mild to moderate episodes of anaphylaxis who do not have severe respiratory and cardiovascular symptoms should be observed for at least 4 hours in a clinic setting before discharge. For example, a patient receiving immunotherapy injections who experiences anaphylaxis should be observed in a clinic setting because late phase reactions, especially involving the lung, may occur. Patients experiencing serious anaphylaxis should be hospitalized and monitored for at least 24 hours. In addition to the possibility of late phase allergic reaction, these anaphylactic reactions can become protracted and very difficult to manage in an outpatient setting. These patients need very close medical observation and may require intensive medical treatment and monitoring.

There are certain situations in which allergy desensitization protocols can be offered to the patient.¹⁰ The best examples include anaphylaxis to penicillin, insect venom anaphylaxis, and in some cases, aspirin.

These procedures are performed under the supervision of an allergist and are typically undertaken in a medical facility equipped to manage acute anaphylactic episodes. Once the patient is desensitized, a maintenance protocol is followed to prevent future episodes of anaphylaxis if the patient accidentally is exposed to the offending allergen.

In summary, the apparent rise in the incidence of anaphylaxis appears to be a direct result of an increasing exposure to allergens. The mast cell is the central cell in the initiation of these generalized reactions. A detailed history and clinical assessment can be very useful in the differential diagnosis of these generalized reactions. Most cases of anaphylaxis are secondary to insect stings, antibiotics, common food allergens, and immunotherapy injections. A delay in their recognition can result in significant morbidity and mortality. The prompt administration of epinephrine remains the mainstay of therapy for acute anaphylactic episodes and educating the patient and family is critical in the overall treatment and prevention of future episodes of anaphylaxis. Finally, keep in mind that patients with asthma may be at higher risk for more severe anaphylactic reactions.

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There Ain't No Justice

J. Kelley Avery, M.D.*

Case Report

A 16-month-old male infant who has had the usual upper respiratory infections of babies - otitis, media, red throat, bronchitis - and who has responded to treatment with antibiotics, is brought to his doctor on the 10th of the month for sudden onset of fever, rhinorrhea, anorexia, and malaise. Examination reveals a red throat, no significant adenopathy, a negative chest examination, and a fever of 103.2°F. An injection of benzathine penicillin was given and acetaminophen was prescribed for the fever.

Three days later the child had not improved, and office notes describe a "very irritable" little boy who still had a red throat and was still somewhat lethargic and febrile. There were no other positive physical findings. At this point, the attending physician added to the treatment cephalexin, a cephalosporin, by mouth.

The following day the mother brought the child to the emergency room with continued fever, anorexia, and irritability; the fever again was recorded as 103.2°F and again the examination showed only a "red throat." A specific reference in the record stated that there was "no stiff neck." The mother was advised to continue the cephalexin and ASA for fever. Laboratory studies revealed a WBC count of 13,400/cu mm with 45% segmented neutrophils, 3% bands, and 52% lymphocytes.

Two days later, six days after the onset of fever, with the child still very sick, the examination showed a stiff neck. CSF studies showed 267 WBCs, mostly segmented neutrophils, and an elevated protein; cultures grew *Hemophilus influenzae*, type B. Amoxicillin was begun immediately after the spinal fluid was obtained. The child was afebrile in four days and recovered within a week. The amoxicillin was continued for a total of 10 days.

As the patient improved, it became apparent that his hearing was severely impaired. After a thorough evaluation by a speech and hearing center, it was de-

termined that the deafness, in all probability due to the *Hemophilus*, was very probably going to be permanent. Shortly afterward, a lawsuit was filed charging the attending physician with negligence because of the delay in diagnosis of the true nature of the child's illness. It was charged that this delay in diagnosis caused the little boy's deafness.

Loss Prevention Comments

In the development of this case, expert witnesses gave testimony on both sides of this issue. Very credible physicians took opposite views on the relationship of the delay in diagnosis to the complication of deafness. The expert for the plaintiff stated that the probability was that if the antibiotic had been started earlier, the deafness would not have occurred. The defense expert pointed out that at least half the time deafness would have developed in a situation like this regardless of when appropriate treatment had been started.

The defense further pointed out that on the first day that any evidence of meningeal irritation (stiff neck) developed appropriate treatment was begun.

The claims review committee of SVMIC thoroughly reviewed this case on two occasions and considered that there had been no significant deviation from an acceptable standard of care.

Both the attending physician and the emergency room physician were sued and the jury found against both. The award was in the high six figures.

While there was no deviation from the standard of care in this case, can we learn anything from this case that might prevent this type of litigation? Yes. We can learn that a jury faced with a situation of this type is likely to award lots of money because of the expenses incurred and the likelihood of future costs related to the child's deafness. We can also learn to examine the CSF early in the patient with a febrile illness where there is no apparent cause and there has been no response to the usual treatment. For the physician caught up in this kind of situation there truly "ain't no justice."

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Company, Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in August 1990. It is reprinted here with permission.

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Cardiology Commentary and Update

Jack McKee, M.D.*
Julian Javier, M.D.**
Vito Calandro, M.D.**
Eugene Smith, M.D.**
Kwabena Mawulawde, M.D.***
J. David Talley, M.D.**

Advances in the Treatment of Left Ventricular Systolic Dysfunction

The treatment of congestive heart failure (CHF) was performed centuries before the physiologic basis of the disease was accepted. Certainly the Romans, and quite possibly the ancient Egyptians, used plants medicinally which contained cardiac glycosides. Although these therapies were effective in relieving symptoms, they were not directed intentionally at a specific physiologic defect. Hence, it was not until systolic dysfunction was conceptually understood that therapies could be designed to correct the various aspects of CHF. This article describes some of these modalities in terms of mechanisms of action, and indications for use in clinical practice.

Patient Presentation

The patient is a 59-year-old white male with a history of diabetes mellitus. He sustained an acute inferior myocardial infarction and was transferred to our hospital 21-days later for cardiac catheterization (see Complete Cardiac Diagnosis, Table 1). He had severe triple vessel disease: left main 50-60% distal stenosis, left anterior descending 40-50% stenosis, circumflex 30% stenosis, and right coronary 70-80% stenosis. His left ventricular ejection fraction was < 25%, confirmed by MUGA. While being evaluated for surgical revascularization, he developed florid pulmonary edema and cardiogenic shock, requiring intubation and intraaortic balloon pump (IABP) support. He was eventually weaned from mechanical support, but required a continuous infusion of vasopressors to maintain an adequate cardiac output. There was no evidence of viable myocardium when studied with a perfusion scan. There was no contraindication for cardiac trans-

plant and he was listed as status I. Subsequently, minimal exertion such as sitting up in bed produced hemodynamic instability and oxygen desaturation. He was considered as candidate for left ventricular assist device (LVAD), and underwent surgery on 9/12/96 for placement of a Heartmate model 1000A® Thermo Cardiosystems Inc., Woburn, MA) assist device (Figure 1). He has had a slow and steady recovery.

Two weeks after LVAD placement, he was exercising using a stationary bicycle four times per day for 15 minutes, and can now ambulate and exercise with minimal assistance. His creatinine has improved from 2.4 mg/dl prior to surgery to 0.9 mg/dl, indicating a significant improvement in end organ perfusion. He is currently awaiting cardiac transplantation.

Etiologies of Congestive Heart Failure

There are many causes of CHF, but in the United States several categories dominate in terms of incidence within the population. In general, diseases which cause functional changes within the myocardium have the potential for altering contractility. It is when cardiac function becomes inadequate to provide necessary perfusion to end organs that CHF manifests clinically. In an attempt to improve this problem, the body reacts by activating neuroendocrine systems.¹ From a functional standpoint, this a sound mechanism provided that there is sufficient cardiac reserve. However, in states where impaired contractility is severe, no such reserve exists and the neuroendocrine system actually worsens hemodynamics and thus the symptoms of heart failure.²

Diseases that produce cardiac injury directly may be ischemic, infectious, toxic, or infiltrative. These may present as acute illnesses with rapid deterioration, or as insidious processes that become apparent only after exhaustive diagnostic testing. Examples include: atherosclerotic heart disease, cardiomyopathy from viruses such as group B coxsackievirus, alcoholic or chemotherapy-related cardiomyopathy, and deposition

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Table 1
Complete Cardiac Diagnosis

<i>Etiology:</i>	Atherosclerotic heart disease
<i>Anatomy:</i>	Cardiac catheterization (8/1/96); left main 50-60% distal stenosis, 50% mid stenosis of left anterior descending coronary artery with 80% stenosis of the first diagonal branch, 30% mid stenosis of the circumflex coronary artery with 80% stenosis of the first obtuse marginal, 70-80% mid stenosis of the right coronary artery.
<i>Physiology:</i>	Cardiac catheterization; < 25% left ventricular ejection fraction Echocardiogram; global hypokinesis with anterior apical dyskinesis. MUGA; left ventricular ejection fraction 23%
<i>Functional:</i>	Class IV
<i>Objective:</i>	Severe disease

of light chains in amyloidosis.

Another important basis for the development of cardiac failure is the eventual decompensation of ventricular architecture and function from hypertrophic states. This would encompass those diseases which require increased myocardial mass to sustain an adequate cardiac output.³ Examples in this category would include among others, systemic arterial hypertension, and valvular heart disease.

The list of diseases and pathological states which can give rise to CHF is long, and the treatment should be targeted to the specific etiology. When this is not possible, treatment should be directed to treat clinical symptoms in order to improve patients quality of life and long term survival. Ultimately, the underlying physiology in systolic dysfunction is identical and thus requires treatment in a similar manner-albeit to varying degrees. This should not imply that mortality or morbidity are independent of etiology, as will be illustrated in the section on treatment.

Pharmacological Management

The goal in managing any disease with medication is to cure the underlying disease or to relieve symptoms with minimal or acceptable side effects. The treatment of CHF has been practiced for centuries with local preparations and plant extracts. Over time, these remedies were replaced or modified based on scientific discovery and an understanding of the pathologic processes leading to CHF. Currently, it is standard practice for the clinician to use vasodilators, inotropic agents, and diuretics, either alone or in combination, for the treatment of CHF. Additionally, there are several clinical trials underway which hopefully will show that other classes of drugs are effective in modifying the morbidity and mortality of ventricular failure.

Cardiac Glycosides. Digoxin and related compounds are among the oldest medications which are still in

use today. Although digoxin has been used for many years, it was not until recently that randomized trials were done looking at its effects in patients with heart failure. The Randomized Assessment of Digoxin in Inhibitors of the Angiotensin Converting Enzyme (RADIANCE) trial showed that when digoxin was withdrawn from patients taking a combination of digoxin, an angiotensin converting enzyme (ACE) inhibitor, and a diuretic, they experienced a significant decrease in exercise tolerance, New York Heart Association

(NYHA) class, and quality of life.⁴ Despite these findings however, there is a paucity of clinical trials addressing its effect on mortality when used in congestive failure. Recently, the Digitalis Investigators Group (DIG) presented data from a randomized trial in which patients with congestive failure were given digoxin or placebo. The study found no improvement in patients treated with digoxin, although a significant reduction in hospitalizations for worsening CHF was noted.⁵

Digoxin not only acts by providing inotropic support to the failing heart, studies have shown that it also plays a role in the autonomic and neurohumoral systems in patients with CHF, which is fundamental to the pathogenesis of CHF.¹

ACE Inhibitors. ACE Inhibitors prevent the conversion of angiotensin I to angiotensin II, and thereby interfere with the production of aldosterone. In a sense, this is the antithesis of the neurohumoral effects encountered in progressive CHF.² It should come as no surprise then, that ACE inhibitors have shown to be of dramatic benefit in the management of CHF. The Cooperative North Scandinavian Enalapril Survival Study (CONSENSUS), which studied patients with severe CHF showed a 31% decrease in 1-year mortality in patients taking enalapril.⁶ In the Studies of Left Ventricular Dysfunction (SOLVD) trial, which evaluated patients with moderate to severe CHF, there was a survival benefit at one, two and maintained at up to four years in those taking an ACE inhibitor.⁷

The addition of an ACE inhibitor aids in the control of symptomatic CHF, decreases the need for hospitalization, and thus far is the only medication that has shown to prolong survival in patients with left ventricular dysfunction. ACE inhibitors have become the mainstay therapy for CHF.

Calcium Channel Blockers. These medications have not been used extensively for the treatment of CHF. Despite calcium channel blockers being potent vasodilator drugs, patients with left ventricular dysfunction

have shown to have an unfavorable response to treatment with calcium antagonists such as nifedipine.⁸ However, newer classes of dihydropyridines were studied in the Prospective Randomized Amlodipine Survival Evaluation (PRAISE). In this trial, there was a significant reduction in death or repeat hospitalization for a major cardiac event in those patients with nonischemic cardiomyopathy, but not in those with ischemic cardiomyopathy.⁹

There are currently ongoing trials evaluating the role of newer calcium antagonists in the treatment of CHF.

Beta-Adrenergic Antagonists. Beta-blockers have historically been considered contraindicated in patients with left ventricular dysfunction. However, with the understanding of the pathophysiology of heart failure, specifically the importance of the autonomic nervous system, investigators have become more interested in their use in patients with CHF. Metoprolol has been shown to improve exercise tolerance and quality of life in patients with dilated cardiomyopathy.¹⁰ Carvedilol, a drug with α and β effects, has also shown great promise in treatment of CHF.¹¹

Diuretics. Diuretics have been a mainstay in the symptomatic control of CHF for many years. They act primarily by reducing preload and consequently the filling pressure of the failing myocardium. They do little to improve cardiac output, and have not been shown to alter mortality in patients with CHF. Therefore, diuretics are used mainly for symptomatic control of chronic CHF, or in settings such as acute pulmonary edema.

Mechanical Devices

CHF can be thought of as a disease process with a spectrum of symptoms ranging from asymptomatic to positively incapacitating despite maximal use of medications. It is for the latter group that interventional devices have been designed in order to sustain life, usually in attempt to provide cardiac transplantation in the near term. In general they are intended to relieve the myocardium of its workload. By doing so, it is possible to allow the heart to "rest," or in some cases to be "assisted" for prolonged periods.

Intraaortic Balloon Pump. The IABP was designed to be inserted into the aorta with inflation and deflation synchronized with diastole and systole respec-

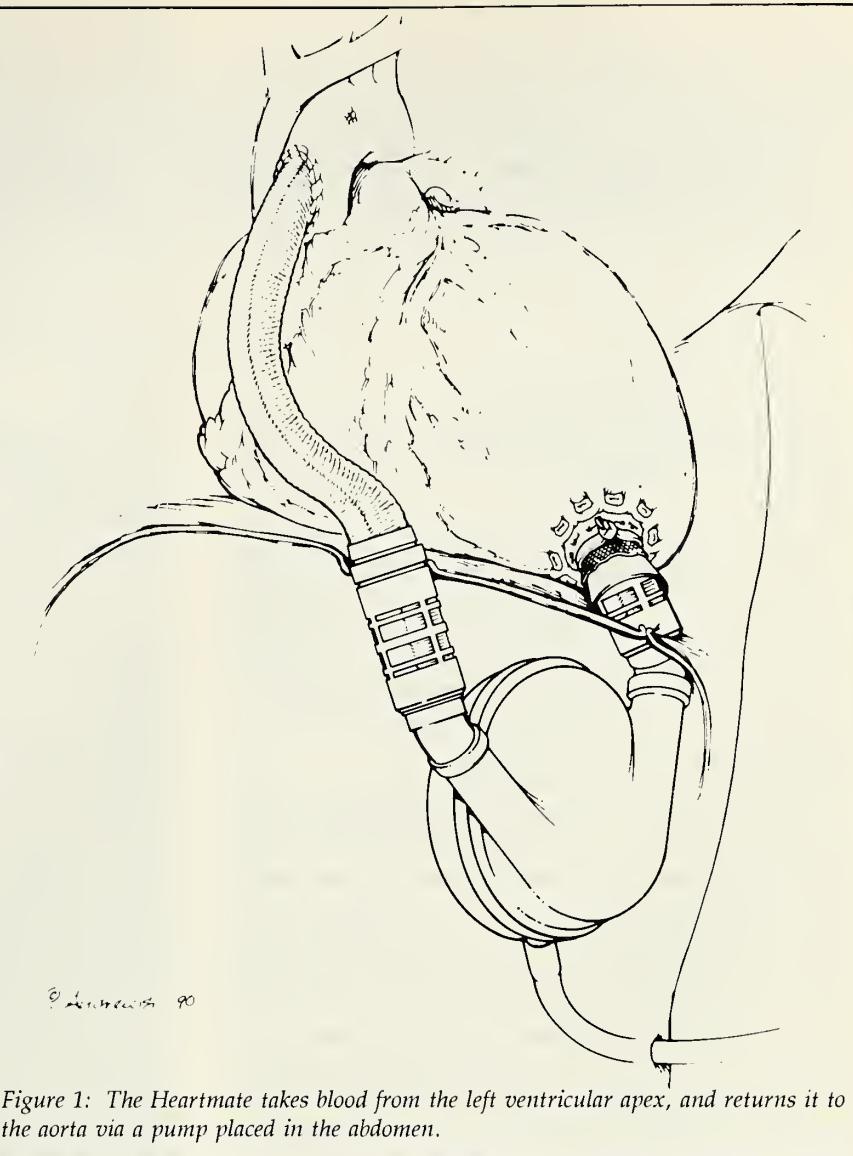


Figure 1: The Heartmate takes blood from the left ventricular apex, and returns it to the aorta via a pump placed in the abdomen.

tively. Importantly, with this device in place, there is immediate afterload reduction which produces a decrease in workload for the failing myocardium. Most of the data regarding the indications for use of such a device are in the settings of acute myocardial infarction, and in prophylaxis for high-risk coronary angioplasty. In these situations, increases in coronary artery blood flow velocity is thought to be an important mechanism of action.¹² Indeed, the use of an IABP in patients with cardiogenic shock or refractory CHF would be considered one alternative to an otherwise baleful outcome. However, there are reports of patients successfully remaining on IABP for several months while awaiting transplant.¹³

Left Ventricular Assist Device. One of the most innovative devices currently in use is the left ventricular assist device (LVAD). The development of the LVAD was born from earlier attempts to design a more permanent artificial heart which met with limited success. The basic principle of the LVAD is to mechani-

cally "assist" the left ventricle with a pump which is outside of the ventricular chamber. Blood is taken through an orifice in the ventricular apex, and received into a pump which in turn drives the blood into the aorta by way of a conduit. The entire unit is positioned within the abdomen while the conduits pass through the diaphragm, one from apex to the pump and another connecting the pump to the aorta. The LVAD is then connected to an external energy supply which may either be worn or carried depending upon the particular model.¹⁴

There are two types of LVAD, pulsatile and nonpulsatile. Nonpulsatile devices are rarely used today as a bridge to transplantation since they require that the patient remain in bed, often intubated, and anticoagulated making them more susceptible to complications.

Pulsatile devices, like the one used in our patient, allows for patient mobility and can provide support for extended period of time periods while awaiting transplantation. LVAD's allow the patient to ambulate and even exercise prior to their transplant. The improvement in cardiac output is also reflected by improved function of other organs such as kidneys, lungs, and even the neurohumoral system.

Although the initial use of left ventricular assist devices was associated with 40-50% mortality, nowadays survival until transplantation is close to 90%. This has been attributed to the use of more sophisticated devices and better patient selection. In one series of 21 patients, 81% were successfully supported until transplantation with all of these patients achieving NYHA class I or II prior to transplantation.¹⁵ While success has been great, it is important to mention that these devices are not without risks. Possible complications include: infection, peripheral emboli, and development of antibodies secondary to the use of multiple transfusions of red blood cells and platelets.

Transplantation

Ironically, the last step in the treatment of CHF offers the greatest improvement in symptoms and prognosis. This holds true only for those patients with severe congestive failure, since the relative morbidity and mortality of their disease outweighs the risks inherent in transplantation.

Undoubtedly, patients with New York Heart Association class IV CHF who undergo transplantation have an improvement in survival when compared with those managed medically.¹³ With the aid of new and more specific immunosuppressive therapies which decrease the incidence of organ rejection and makes the patient less susceptible to opportunistic infection, the current 1 and 5 year survival of cardiac transplant patients is 80-90% and 60-70%, respectively.¹⁶

Conclusion

CHF is a complex pathologic process which provides the clinician with many diagnostic and thera-

peutic challenges. Once the pathophysiology of systolic dysfunction was understood, therapies could be designed in an attempt to alter the clinical course. Presently, medications such as ACE inhibitors have been shown to improve survival while aiding in symptomatic control. With the addition of newer medications it may ultimately be possible to stem the progression of even the most severe congestive failure. Until then; however, there are invasive measures to provide support as a bridge to transplant. It remains to be seen which will provide the greater contribution.

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Eastern Equine Encephalitis Virus Isolated in South Arkansas

Eastern Equine Encephalitis (EEE) in horses occurs sporadically in Arkansas and surrounding states (Louisiana, Georgia, Florida, Texas, etc.). EEE is maintained in a natural cycle between the mosquito Culiseta melanura and wild birds. Other species of mosquitoes may transmit the virus from infected birds to horses, emus and man.

Reports of EEE in emus appear to be increasing as their popularity increases. These birds are exquisitely susceptible to infection with the EEE virus and serve as an excellent indicator that mosquitoes in the area are carriers of the virus. EEE virus has recently been isolated from a flock of emus in El Dorado. Thirty of 177 birds have shown bloody diarrhea and died. The virus has been identified as the causative agent by a laboratory at Texas A&M University. EEE virus was also isolated several days later from a flock of 50 emus about 50 miles away where six showed bloody diarrhea and died. Those isolates are further evidence that the virus is present in mosquitoes in southern Arkansas and possibly the entire state. It is possible, but not proven, that humans may become infected with the disease by exposure to infected blood and tissues of EEE infected emus.

The disease is transmissible to humans by the bite of an infected mosquito. Headaches, drowsiness, fe-

ver, vomiting and stiff neck are the usual presenting symptoms. Tremors, mental confusion, convulsions and coma may develop rapidly. Treatment is supportive as in other viral encephalitides. Serum from suspected patients may be sent to the virology lab at the Arkansas Department of Health (ADH) for further submission to the CDC laboratory in Fort Collins, CO. A complete screen for most arboviral diseases will be conducted. Please submit at least 2 ml of serum.

EEE has occurred in recent years in horses from southern Pulaski county to south central Arkansas. Clinical signs of encephalomyelitis occur about 5 days after infection and most deaths in horses occur 2 or 3 days later. Veterinarians are requested to submit the intact brain to the ADH lab for rabies testing. Brain tissue will be sent to the U.S. Department of Agriculture laboratory in Ames, Iowa for identification of the EEE virus. It is recommended that all equines in the area be vaccinated annually against EEE.

To prevent human cases, individual protective measures should be taken to avoid mosquito infested areas. The use of insect repellents containing DEET on exterior clothing and wearing protective clothing is recommended.

For more information, call the Arkansas Department of Health, Division of Epidemiology, at (501)661-2597.

Reported Cases of Selected Diseases in Arkansas

Profile for August 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Aug. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases 1995	Total Reported Cases YTD 1994	Total Reported Cases 1994
Campylobacteriosis	33	163	103	153	124	187
Giardiasis	16	99	81	131	65	126
Shigellosis	29	83	86	176	128	193
Salmonellosis	65	283	200	332	206	534
Hepatitis A	34	337	397	663	166	253
Hepatitis B	5	55	50	83	36	60
HIB	0	0	5	6	3	5
Meningococcal Infections	1	25	26	39	39	55
Viral Meningitis	8	24	29	31	53	62
Lyme Disease	0	20	9	11	14	15
Rocky Mountain Spotted Fever	2	12	26	31	16	18
Tularemia	2	15	19	22	20	23
Measles	0	0	2	2	1	5
Mumps	0	1	5	5	5	7
Gonorrhea	424	3391	3497	5437	4712	7078
Syphilis	50	574	719	1017	728	1096
Legionellosis	0	1	5	5	10	16
Pertussis	0	4	53	59	30	33
Tuberculosis	8	126	147	271	181	264



Getting Acquainted

Gerald A. Stoltz, Jr., M.D. Newly Elected Chairman of the AMS Council

Dr. Gerald A. Stoltz, Jr., President and Laboratory Director with Pathology Services Laboratory in Russellville, was elected Chairman of the AMS Council in May of this year. To him, being a part of the AMS means giving as much as he possibly can to the organization, especially knowing that this effort improves the health of all Arkansans.

With one Council meeting under his belt, Dr. Stoltz will chair his second meeting this month (November 16-17 at Lake Hamilton Resort in Hot Springs). As Chairman of the Council, his duties include residing at all meetings of the Council, serving as Chairman of the Executive Committee of the Council and appointing the Council committees.

When asked what he believes is the most important issue facing the AMS, Dr. Stoltz said, "With all of the managed care impact, at least preserving and hopefully increasing physician interest, not only just being a member, but being an active participant as well."

Dr. Stoltz has a long history of service to the medical field. In addition to his membership and involvement with the AMS, he is a member of Alpha Omega Alpha; Fellow, American Society of Clinical Pathologists; Arkansas Society of Pathologists; American Medical Association; American Pathology Foundation; Pope County Medical Society and Fellow, College of American Pathologists.

He served as President of the Arkansas Society of Pathologists in 1993/1994 and is a past President of the Pope County Medical Society. From 1975 to 1979, he was secretary-treasurer of the Arkansas Society of Pathologists. He has been a member of the Arkansas Foundation for Medical Care since 1977 and has served in various other positions for hospitals and societies.

His professional affiliations are numerous. Since 1973, he has been Director of Pathology and Laboratory Services with AMI-St. Mary's Regional Medical Center in Russellville. With Dardanelle Hospital, he began as a consulting pathologist in 1973 and in 1992 became the Director of Pathology and Laboratory Services. In addition, Dr. Stoltz is affiliated with a laboratory in Fort Smith and hospitals in Danville, Clarksville, Booneville, Ozark, Mena, Waldron, Paris and Heber Springs.

Dr. Stoltz's attended the University of Arkansas School of Medicine in 1965 after he graduated from Hendrix College in Conway. He began his residency training in anatomical and clinical pathology at UAMS's University Hospital in 1969. He then went on to train at USPHS Hospital and Charity Hospital (LSU) in New Orleans and returned to University Hospital in Little Rock where he completed his training in 1973.

Dr. Stoltz is certified in Anatomic and Clinical Pathology with the American Board of Pathology and the American Board of Quality Assurance and Utilization Review.



Preserving and increasing physician interest is the most important issue facing the AMS, said Dr. Stoltz.

Date & place of birth: October 29, 1944, in El Dorado

Spouse: Judy, college professor

Son: Greg, age 26, athletic trainer

Hobbies: Boating on Greers Ferry Lake, traveling to interesting areas and deep sea fishing

If I had a different job, I'd be: Head coach of a college football team playing for a national championship

The person I most admire: Vince Lombardi (former coach of Green Bay Packers football team)

Best Habit: Loyalty and keeping promises

Worst Habit: Never being on time

The turning point of my life was when: I attended Hendrix College

When I was a child, I wanted to grow up to be: A doctor

My work philosophy: I give 120% to work and expect 110% from employees

One word to sum me up is: Complex



Outdoor MD

Information provided by
the Arkansas Game & Fish Commission



Duck hunting to be open every weekend this season

Duck hunting in Arkansas this season will be open every weekend from before Thanksgiving until deep into January.

The duck and goose hunting dates and bag limits were set by the Arkansas Game and Fish Commission at its August monthly meeting.

The duck hunting dates are: Nov. 23-Dec. 8, Dec. 14-22 and Dec. 26-Jan. 19. The structure of 50 days of hunting and a maximum of five ducks per day is the same as last season. The only change in the bag limit is that hunters may kill two redhead ducks a day - last year, just one redhead was allowed. Four mallards can be taken per day, but only one can be a female.

Goose hunting dates continued to be liberalized by the Commission in accordance with guidelines handed down by the U.S. Fish and Wildlife Service. Snow geese have multiplied rapidly over the North American continent and many more are wintering in Arkansas than in past years.

Snow goose hunting season in Arkansas this year will be 107 days, and 10 snow geese per day can be taken in addition to the limits on Canada geese and white-fronted (specklebelly) geese.

The goose hunting dates are: Snow geese, Nov. 23-March 9; bag limit 10 a day; possession limit 30, up from last year's 20. Canada geese, East Arkansas Zone, Jan. 18-Feb. 9; bag limit two a day. Canada geese, West Arkansas Zone, Jan. 25-Feb. 2 and Feb. 5-9; bag limit one a day. White-fronted geese: Nov. 23-Jan. 31; bag limit two a day.

Tim Moser, waterfowl biologist with the Commission, said, "All indications are for another really good year in numbers of ducks. Last year, for the first time, Arkansas hunters killed over one million ducks. Arkansas was first in the nation in the number of mallards taken by hunters, third in the nation in total number of ducks taken and third in the nation in the number of ducks taken per hunter."

The statistics are compiled by the Fish and Wildlife Service from surveys of hunters. Current estimations of North American duck populations are 89 million, Moser said.

Other duck hunting actions taken by the Commission at its August meeting:

1. If approved by the Fish and Wildlife Service, a youth-only day of duck hunting will be Dec. 23.
2. Waterfowl hunting will be mornings only, ending at noon, on Cane Creek Lake in Lincoln County in southeast Arkansas.
3. The Shiloh Bay area on Lake Dardanelle, north of Interstate 40 at the northern edge of Russellville, will be opened to Canada goose hunting.

Regulations tabloid gives details of hunting, fishing laws

Do you need to know the exact rules governing Arkansas hunting and fishing? These are available in a tabloid newspaper from the Game and Fish Commission.

Jane Rice, publication editor for the Commission, said, "We have two publications on our regulations. One is the compact summary booklets, one for hunting and another for fishing, that are available from license dealers and Game and Fish offices all over the state. These will answer nearly all questions about our rules. For the exact wording and legal terminology of the rules, some sportsmen may want the official code regulations, which we update and print twice a year."

The regulations tabloids are free and can be obtained from the Game and Fish Commission's information office at 223-6351.

New Members

EL DORADO

Daniels, Charles Dwayne, Orthopedic Surgery. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1996.

FAYETTEVILLE

Davis, Thomas Jay, Anesthesiology. Medical Education, UAMS, 1992. Internship/Residency, 1993/1996.

FLIPPIN

Itzig, Charles Blum, Jr., General Surgery. Medical Education, University of Mississippi, Jackson, 1965. Internship, Baptist Memorial Hospital, Memphis, Tennessee, 1966. Residency, VA Hospital, Memphis, Tennessee, 1970. Board certified.

FORREST CITY

Sarinoglu, Cem, Obstetrics/Gynecology. Medical Education, Ege University Medical School, Bornova, Izmir, Turkey, 1986. Internship/Residency, University of Tennessee, Memphis, 1993/1996.

FORT SMITH

Hughes, Juan M., Internal Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1996.

Kelly, James Edward, III, Plastic Surgery. Medical Education, Queens University, Kingston, Ontario, Canada, 1989. Internship/Residency, McMaster University, 1990/1994. Board eligible.

HOT SPRINGS

McGraham, Bethany A., Emergency Medicine. Medical Education, Loyola University Stritch School of Medicine, Maywood, Illinois, 1991. Internship, Lutheran General, Park Ridge, Illinois, 1992. Residency, Truman Medical Center, Kansas City, Missouri, 1995. Board certified.

Spiers, Jon Phillip, Cardiovascular & Thoracic Surgery. Medical Education, University of Tennessee, Memphis, 1988. Internship, University of Tennessee, Memphis, 1989. Residency, University of Tennessee, Memphis, 1994, and Baylor College of Medicine, Houston, Texas, 1996. Board certified.

St. John, Melody Dawn, Rheumatology. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1992. Board certified.

JACKSONVILLE

Pastor, Randy Joseph, Family Practice. Medical Education, Ohio University College of Osteopathic Medicine, Athens, 1986. Internship, Cuyahoga Falls General Hospital, Ohio, 1987. Board certified.

LITTLE ROCK

Blackstock, Terri T., Gastroenterology. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1994. Board pending.

Brandt, John Oliver, Gastroenterology. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996.

Field, Charles Robert, General Pediatrics. Medical Education, UAMS. Internship/Residency, UAMS, 1979/1981. Board certified.

Flamik, Darren E., Emergency Medicine. Medical Education, Texas Tech University, Lubbock, 1993. Internship/Residency, UAMS, 1996.

MOUNTAIN HOME

King, William Ronald, Anesthesiology. Medical Education, University of Mississippi School of Medicine, Jackson, 1992. Internship/Residency, University of Texas Medical Branch, Galveston, 1996. Board eligible.

NEWPORT

Molnar, Istvan, Internal Medicine. Medical Education, Semmelweis Medical School, Budapest, Hungary, 1991. Internship/Residency, Meridia Muron Hospital, Cleveland, Ohio, 1993. Board certified.

RUSSELLVILLE

Pilkington, Neylon S., Pediatrics. Medical Education, UAMS, 1993. Internship, UAMS, 1994. Residency, UAMS and Arkansas Children's Hospital, 1996.

SEARCY

Lowery, Ronald L., Ophthalmology. Medical Education, UAMS, 1992. Internship, UAMS, 1993. Residency, University of South Florida, Tampa, 1996. Board eligible.

SHERIDAN

Covington, Brenda Kaye, Family Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996. Board eligible.

SPRINGDALE

Dunigan, Rodger Dale, Anesthesiology. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1996.

OUT OF STATE

Craytor, Bret Fredrick, Pulmonary Disease & Critical Care. Medical Education, University of Oklahoma H. S. C., Oklahoma City, 1988. Internship/Residency, University Hospital, Oklahoma City, 1989/1991. Fellowship, University Hospital, Oklahoma City, 1996.

O'Sullivan, Patrick J., Neurology. Medical Education, University College, Dublin, Ireland, 1964. Internship, St. Vincent Hospital, Dublin, Ireland, 1965. Residencies, St. Vincent Hospital, Dublin, Ireland, 1967, and University of Rochester, Strong Memorial Hospital, New York, 1972. Board certified.

Pohle, Floyd G., Family Practice. Medical Education, University Autonoma De Guadalajara, Guadalajara, Jalisco, Mexico, 1987. Internship/Residency, AHEC-El Dorado.

RESIDENTS

Abu-Hamda, Emad Mohammad, Internal Medicine. Medical Education, University of Jordan, Amman, Jordan, 1994. Internship, UAMS.

Alderink, Carlisle Julianna, Pathology. Medical Education, UAMS, 1993. Residency UAMS.

Behrens, Bing Xie, Neurology. Medical Education, Sun Yat-sen University of Medical Sciences, Guangzhou, P.R. China, 1982. Internship/Residency, UAMS.

Bhutta, Adnan T., Pediatrics. Medical Education, Aga Khan University, Karacih, Pakistan, 1993. Residency, UAMS.

Esquibel, Ramona Dee, Emergency Medicine. Medical Education, University of South Florida, Tampa, 1995. Internship/Residency, UAMS.

Fogata, Maria Luisa C., Radiology. Medical Education, University of the Philippines, Manila, Philippines, 1983. Internship, University of the Philippines, Philippine General Hospital, Manila, 1989. Residency, UAMS.

Griffin, David Dean, Internal Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS.

Hatley, Tina Whytsell, Pediatrics. Medical Education, UAMS, 1996. Internship, UAMS.

Helsel, Jay Christopher, Anatomic and Clinical Pathology. Medical Education, University of Missouri School of Medicine, Kansas City, 1996. Residency, UAMS.

Hendrix, Barry D., Family Practice. Medical Education, UAMS, 1995. Internship, AHEC-Southwest.

Hernandez, Joseph M., Psychiatry. Medical Education, University of Texas Medical School, San Antonio, 1996. Internship/Residency, UAMS.

nio, 1996. Internship/Residency, UAMS.

Hernandez, Nicole B., Emergency Medicine. Medical Education, University of Texas Medical School, San Antonio, 1996. Internship/Residency, UAMS.

Hudson, Amy Rapp, Pathology. Medical Education, University of Mississippi School of Medicine, Jackson, 1993. Residency, University of Mississippi/UAMS.

Kiser, Thomas Scott, Physical Medicine & Rehabilitation. Medical Education, University of Missouri, Columbia, 1992. Internship, UAMS, 1993. Residency, UAMS.

Kohli, Manish, Internal Medicine. Medical Education, Maulana Azad Medical College, New Delhi, India, 1990. Internship, Maulana Azad Medical College, India. Residency, Cook County Hospital, Chicago, Illinois, 1996. Fellowship, UAMS.

Mallory, Michael D., Pediatrics. Medical Education, Medical College of Georgia, Augusta, 1994. Internship/Residency, UAMS.

Netterville, J. Kevin, Emergency Medicine. Medical Education, Louisiana State University School of Medicine, Shreveport, 1995. Internship/Residency, UAMS.

Phillips, John David, Pediatrics. Medical Education, University of Texas Southwestern Medical School, Dallas, 1992. Internship, Children's Medical Center, Dallas, 1993. Residency, UAMS.

Quintero, Mauricio, Family Medicine. Medical Education, Pontificia Universidad Javeriana, Bogota, Columbia, 1991. Internship, UAMS.

Sambasivan, Arathi, Anesthesiology. Medical Education, Ambedkar Medical College, Bangalore, India, 1991. Internship/Residency, UAMS.

Singh, Malwinder, Internal Medicine/Pulmonary & Critical Care. Medical Education, Government Medical College, Jammu, India, 1988. Internship/Residency, Our Lady of Mercy Medical Center, Bronx, New York, 1994/1996. Fellowship, UAMS.

Stewart, Casey D., Pediatrics. Medical Education, UAMS, 1996. Internship, UAMS.

Tran, Viet N., Orthopedic Surgery. Medical Education, University of Texas Medical Branch, Galveston, 1996. Internship/Residency, UAMS.

Yeh, Y. Albert, Medicine/Pathology. Medical Education, National Taiwan University, Taipei, Taiwan, 1989. Internship, National Taiwan University, 1989. Residency, UAMS.

STUDENTS

Lee Eric Arthur

Holli Nicole Banks

Tanya R. Bell

Christian Gerrit Blankers

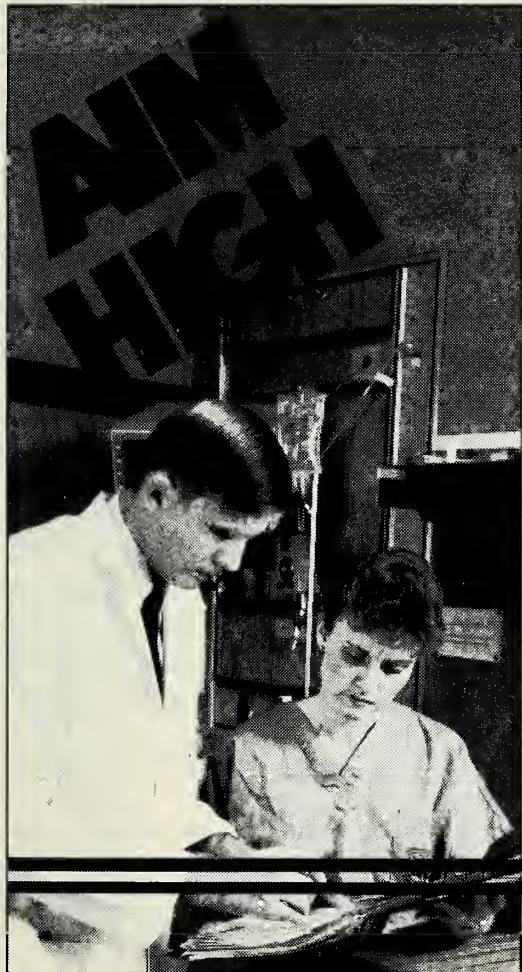
James Scott Bridges

Joe Christopher Colclasure

Constance J. Crisp

Peter Marshall Daut
Scott Michael Dickson
Robert H. Ebert
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Nova Darcel Goosby
Avis Alphonso Hall
Nada Harik
Edward Leslie Jackson
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Dean B. Priest, Jr.
Kimberly Anne Roberts
Christopher Patrick Schach
Daniel L. Schneider
Christopher Simpson
James H. Smith
Stacy Anne Smith-Foley
Melissa Diane Stennett
Benjaman Travis Wilkins
Robert B. Wilson, III
Jerry Mitchell Winkler



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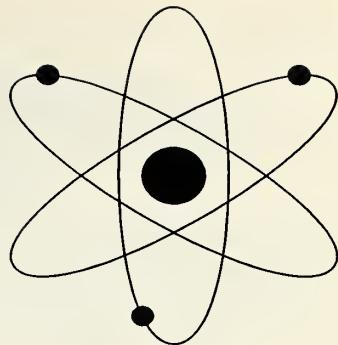
Physician's Name: _____ DOB: _____ Specialty: _____

Radiological Case of the Month

David Harshfield, M.D., Editor

Authors

Ramesh Avva, M.D.
David R. McFarland, M.D.
John F. Eidt, M.D.



History:

A 37-year-old right-handed man presented with a six-month history of pain and numbness in the index and long fingers of the left hand. The patient works as a lumberjack and has a 40 pack-year history of smoking. There was no history of diabetes mellitus, hypertension or heart disease. Physical examination revealed skin breakdown on the distal aspect of the third digit with patches of necrosis and wet gangrene, and thinning and discoloration of the skin on the distal aspect of the second digit.



Figure 1



Figure 2

Figures:

Figure 1: Digital arteriogram showing aneurysm of distal ulnar artery (arrow) and embolization of numerous digital branch arteries (arrowheads).

Figure 2: Digital subtraction arteriogram showing pronounced lack of digital artery filling.

Hypothenar Hammer Syndrome

Diagnostic Examination:

Diagnostic arteriography of the right upper extremity from a common femoral artery approach. The examination (Figures 1 and 2) revealed an aneurysm of the ulnar artery at the wrist with embolization of digital branches to the second and third phalanges. The remainder of the arteriogram was normal.

Diagnosis: Hypothenar Hammer Syndrome resulting from repetitive arterial trauma secondary to occupational activity.

Discussion:

The hypothenar eminence of the hand is often used to strike tools or objects forcefully in some occupations or is subject to vibratory stresses for prolonged periods of time. These actions can cause repeated episodes where the hook of the hamate bone strikes either the distal ulnar artery or the proximal portion of the superficial palmar arch. The blunt arterial injury leads to vasospasm, vessel stenosis or occlusion, or aneurysm formation with distal embolization. Symptoms of digital ischemia, unilateral Raynaud's phenomenon or pulsatile mass may result. This constellation of history and symptoms is called the Hypothenar Hammer Syndrome, or post-traumatic digital ischemia.

Numerous radiologic appearances of the hypothenar hammer syndrome exist. Kaji et al devised a classification system which divided them into three types. Type I involves just stenosis of the superficial palmar arch. Type II involves either occlusion of the superficial palmar arch at the hook of the hamate, or occlusion of both the superficial and deep palmar arches at this level. Type III demonstrates occlusion of the ulnar artery at the wrist with or without occlusion of the dorsal carpal branch of the ulnar artery.

The different type of radiologic presentations occur because the arterial anatomy of the hand is complex and subject to many variations. The superficial palmar arch is the major terminal branch of the ulnar artery and is complete in only 70% of cases. The deep palmar arch is the terminal branch of the radial artery and is complete 97% of the time. The degree of completeness of the superficial palmar arch and the presence of adequate collaterals may militate the severity of symptoms or even eliminate symptoms altogether. In one study, 127 mechanics were studied and 79 disclosed a history of using the palm of their hand as a hammer. Eleven of these patients had angiographically proven ulnar artery occlusion, but the men complained of mild, occasional symptoms and no objective evidence of ischemia was found.

Most affected patients are males with a mean age of 40 years and a range of 30-56 years in one series. Affected individuals are often employed in the mining, forestry and construction industries. Treatment options have included surgery with resection of the ulnar artery aneurysms and end-to-end reanastomosis, thoracic sympathectomy, and conservative treatment with vasodilators, bed rest, cessation of the harmful activity and cessation of smoking. Good outcome was seen using either approach in one series.

References:

1. Conn J. Jr., Bergan JJ, Bell, JL. "Hypothenar hammer syndrome: Posttraumatic digital ischemia" *Surgery* 68.6 (1970): 1122-1128.
2. Kaji H, Honoma H, Usui M, Yasuno Y, Saito K. "Hypothenar Hammer Syndrome in Workers Occupationally Exposed to Vibrating Tools." *Journal of Hand Surgery (British and European Volume)* 18B (1983): 761-766.
3. Benedict KT, Fr., Chang W, McCready FJ. "The Hypothenar Hammer Syndrome." *Radiology* 111.1 (1971): 57-60.
4. Little JM, Ferguson DA. "The incidence of the hypothenar hammer syndrome." *Archives of Surgery* 105 (1972): 684-685.
5. Vayssairat M, Debure C, Cornier J-M, Bruneval P, Laurian C, Juillet Y. "Hypothenar hammer syndrome: Seventeen cases with long-term follow-up." *Journal of Vascular Surgery* 5 (1987): 838-843.

Authors:

Ramesh Avva, M.D., is a resident in Diagnostic Radiology at UAMS.

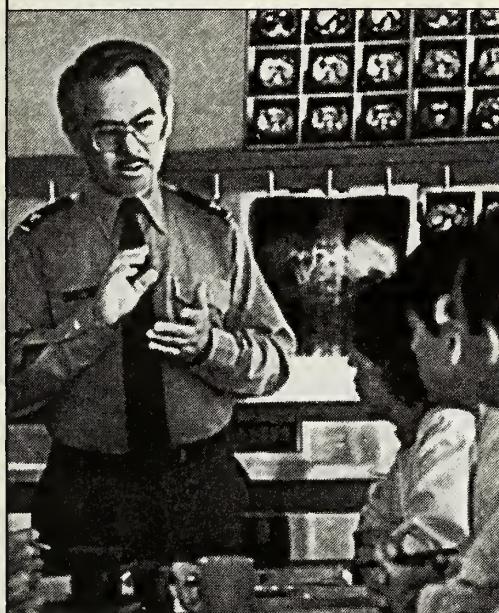
David R. McFarland, M.D., is Associate Professor of Radiology at UAMS.

John F. Eidt, M.D., is Associate Professor of Surgery at UAMS

Editor:

David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

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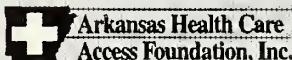
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see an eye doctor and no
longer fear the loss of my
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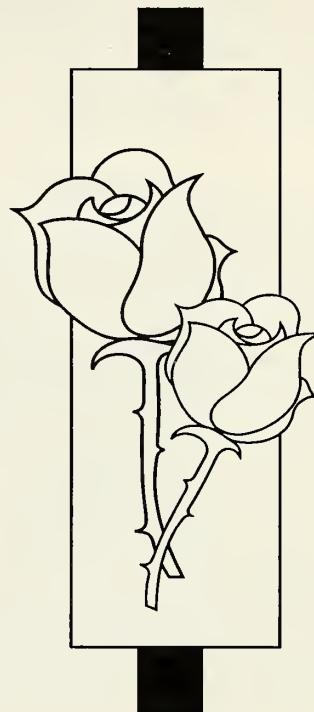
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In Memoriam

William Joseph Roberts, M.D.

Dr. William Joseph Roberts, of Charleston and formerly of Waldron, died Monday, October 7, 1996. He was 59. He is survived by four sons, Joseph Keith Roberts of Cordova, Tennessee, Bradley Baber of Barling, Arkansas, Travis Bruce Roberts of New Orleans, Louisiana, and Justin Wade Roberts of Clearwater, Florida; one daughter, Rachael Bentley Roberts of Fort Smith, Arkansas; two grandchildren, Joseph Barrett Roberts and Mariel Elizabeth Roberts; and one sister, Della Jane Hill of Navarra, Florida.



Things To Come

December 4

ARKANSAS LOCATION!

How to Run a More Profitable Practice. Little Rock Hilton, Little Rock, Arkansas. Sponsored by the Arkansas Medical Society. For more information, call (501) 224-8967 or 1-800-542-1058.

December 6-7

7th Incontinence Update: Urogynecology & Urodynamics Seminar and Interactive Workshop with (Optional) Post-Conference Clinical Workshop. Hyatt Regency, New Orleans, Louisiana. Sponsored by Tulane University School of Medicine Department of Urology, Nursing Resource Center and Office of Continuing Medical Education. For more information, call (504) 588-5466 or 1-800-588-5300.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

February 8-10, 1997

12th Annual Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Center for Continuing Medical Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 9-14, 1997

Advances in Imaging: 1997. Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Tulane University Medical Center and Louisiana State University School of Medicine. For more information, call (504) 588-5466 or 1-800-588-5300.

April 4-5, 1997

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 10-12, 1997

Refresher Course & Update in General Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07

Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
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Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
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VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom

Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center

Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

*Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center***JONESBORO-AHEC NORTHEAST**

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club

Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.

Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.

Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Cardiology Conference, dates vary, 7:00 p.m., locations vary

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center

Gynecologic Malignancies, 3rd Thursday every other month, 7:00 a.m., various area hospitals

Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.

Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 93 Number 7

December 1996

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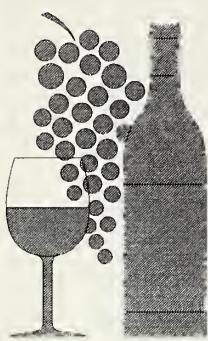
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Cover photo was taken in Northwest Arkansas by A.C. Haralson of the Arkansas Department of Parks & Tourism.



The Sure Proof

Wine is sure proof that God loves us and wants us to be happy.

Benjamin Franklin

Lee Abel, M.D.*

On January 2, 1996, the Federal Government released the 1995 Dietary Guidelines for Americans. This report which is issued every five years by a committee appointed jointly by the Agriculture Department and the Department of Health and Human Services, gives advice about diet and health. Probably the most controversial departure from the 1990 guidelines, was the acknowledgment that alcohol consumption may be healthful.

This significant change apparently occurred only after a great deal of discussion. The growing body of data that links moderate alcohol consumption with certain health benefits was felt too persuasive to ignore. Dr. Marion Nestle, the chairwoman of the department of nutrition and food studies at New York University and a member of the committee, said "It is a triumph of science and reason over politics."¹

The report, which does not encourage drinking and emphasizes the significant harm that more than moderate alcohol consumption can cause, goes on to state that "alcoholic beverages have been used to enhance the enjoyment of meals by many societies throughout human history."¹ The British government has been prompted by the growing scientific evidence to go a step further. In a recent report from the British Department of Health, it was suggested that middle-age and elderly men and postmenopausal women who abstain from alcohol should consider moderate drinking in order to reap the health benefits of alcohol.²

Our understanding of how these benefits come about is limited. Ethanol has long been thought to be the primary protective factor, perhaps through its effect on HDL and LDL cholesterol and fibrinolytic factors. However, there is evidence that not all alcoholic beverages are equally beneficial. For example, a large study in California showed a decreased coronary artery disease mortality in wine drinkers compared to drinkers of beer and liquor (who had a lower coronary

mortality than nondrinkers). Such factors as age, sex, weight and smoking were controlled for, but other factors such as diet, exercise and psychological traits were not. Because of this "inability to control for all confounders" the researchers were unable to conclude that wine definitely conferred more protection.³

Probably the most intriguing study is a well done one from Denmark which generated much publicity because of its striking findings. In this study, wine drinking, but not consumption of beer or distilled spirits, was associated with a large reduction in cardiovascular, cerebrovascular, and all cause mortality. Daily beer consumption (up to 3 to 5 drinks a day) caused no change in the mortality rate compared to nondrinkers, while more than two drinks of liquor a day increased the death rate. The authors of this study point out that their data "suggests that other more broadly acting factors in wine may be present. Antioxidants and flavonoids, which are presumed to prevent both coronary heart disease and some cancers, may be present in red wine. It has also been suggested that tannin and other phenolic compounds in red wine may have a protective effect."⁴

I've noticed that I tend to believe studies that support my prejudices, and so I find the Danish study important. Wine at its core is an elegantly simple and natural beverage. To make wine all one really does is crush grapes. The winds bring yeast which settle on the skin of the grape. When the grape is crushed, the yeast on the outside is brought into contact with the sugar on the inside; fermentation then begins and wine is created. Wine is basically preserved fruit. Is it possible that a glass of wine can be counted as one of the recommended 5 daily servings of fruit and vegetables? Considering the health risks associated with consuming red meat, should it be eaten only when accompanied by the antidote, a glass of red wine? It will be interesting to see if wine's place in our "dietary pharmacopoeia" becomes established, along with such therapeutic agents as broccoli, sweet potatoes and garlic.

Though it remains far from being scientifically

* Dr. Abel specializes in internal medicine and is affiliated with the Little Rock Diagnostic Clinic. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

proven to have special beneficial effects, wine really is one of our oldest medicines. Culturally and historically wine has always been seen as unique among beverages, having salutary effects for both body and mind.⁵ The Greeks and Romans had a God of Wine (Dionysis and Bacchus respectively). The Judeo-Christian tradition is tied even more closely to wine. My introduction to the central role of wine in Judeo-Christian theology came from Jeff Smith, who hosted the popular PBS television series "The Frugal Gourmet," and is the author of numerous cookbooks. He is not your average chef. In fact, he is an ordained Methodist minister, and in the great love he shows for wine, food, people and life, he must surely be doing God's work still.

The references to wine in the Old Testament are numerous, since wine played an important role in Jewish custom and life. Jeff Smith notes that the first thing Noah planted after the flood was a vineyard, because wine was needed to give proper thanks to God. One tradition is the Kiddush which is a blessing said over a cup of wine. In Jeff Smith's book "The Frugal Gourmet Cooks With Wine," in a chapter titled "The Sure Proof" he explains:

To this day every Jewish service opens with the Kiddush. There seems to be an unasked question on the floor of the Temple, a question that need not be asked. Nevertheless the answer is given. The question? "Just how clever is this god that you worship?" The answer? "Blessed art thou, O Lord God, King of the Universe, Creator of the Fruit of the Vine." That settles the discussion! Only the Lord could have come up with something as blessed as wine. Biblically wine was always seen as a sign of the cleverness of the Creator.⁶

Hugh Johnson in "Vintage: The Story of Wine," writes that "The Israelites' interest in wine-growing is a continual theme of the prophets. Isaiah contains advice of planting a vineyard; Amos and Joel, Jeremiah and Ezekial, Zachariah and Nehemiah all use the vine as a symbol of a happy state. Indeed, in the whole of the Old Testament only the Book of Jonah has no reference to the vine or wine."⁷

For Christians, too, wine has played a central role. Recall that the very first miracle of Jesus' ministry was at the wedding in Cana when Jesus changed water into wine. And the story also specifically mentions that Jesus made good wine! (John 2:1-11). In a conversation I once had with my Methodist minister about Christianity and wine, he pointed out that Jesus enjoyed the "community of the table" and was criticized as being a winebibber and glutton (Matt 11:19 and Luke 7:34). Jesus' table was inclusive, he would break bread and drink wine with all.

Jesus also asked to be remembered in a ceremony where wine is a key element. St. Thomas Aquinas wrote "The Sacrament of the Eucharist can only be performed with wine from the vine, for it is the will of Christ Jesus, Who chose wine when He ordained this

sacrament...and also because the wine is in some sort an image of the effect of the Sacrament. By this, I mean spiritual joy, for it is written that wine makes glad the heart of man."^{8,9} Paul recognized the healing qualities of wine when he advised "No longer drink only water, but use a little wine for the sake of your stomach and your frequent ailments" (1 Timothy 5:23). Wine is so integral a part of the Bible that Oxford Professor Hanneke Wirtjes writing in "The Oxford Companion to Wine" states that "The Bible is not suitable reading for teetotallers."¹⁰

Though wine has been exalted in scripture and by poets through the ages as a source of beauty and joy, it is also true that in excess all alcoholic beverages can cause great pain and tragedy. Religions have dealt with this inherently two-sided nature of alcohol in different ways.¹¹ Islam for instance prohibits use of alcohol. Some Protestant denominations, especially since the temperance movement of the late 1800's, have moved away from the traditional Christian position and embraced prohibition against all alcohol, including wine.¹²

This dark side of alcohol poses a dilemma for us as physicians and as parents. As physicians, we are very familiar with the dose effect. One digoxin tablet a day may help, but several a day may kill. Likewise for alcohol; however, alcohol can be associated with addictive behavior and herein lies the concern. Should we avoid recommending something healthful, for fear someone might abuse it? Physicians don't hesitate to advise exercise yet it can be done excessively and harm the patient's health. Part of the difference is that alcohol is a very emotionally charged issue and is often seen in moral terms.¹³ This is coupled with the fact that alcohol abuse is a very common, yet incompletely understood problem.

I remain reluctant to recommend wine to my patients. People have many good reasons for not drinking, and for certain conditions the risks of drinking outweigh the potential benefits. Primarily, I am concerned about violating the physicians' dictum of Primum Non Nocere (First do no harm). On the other hand, one could point out that my attitude is paternalistic and unscientific. There is no evidence that recommending wine in moderation to achieve health benefits will increase the amount of alcohol abuse. Perhaps, we should educate our patients about the benefits as well as the risks, and as usual in medicine always carefully individualize any advice. Given how devastating alcohol abuse can be, caution seems reasonable.

As parents, whether we drink or not, we have the responsibility of helping our children make good choices about alcohol. Alcohol abuse plays a role in the deaths of too many of our teenagers and young adults. There is some suggestion that children raised in a household where alcohol is consumed moderately are less likely to abuse alcohol than children raised in an abstinent home. But whether this is true or not,

the family influence is only one of many. Peer pressure, media portrayals of alcohol¹⁴ and advertising also play a role. I hope my daughter and son, if they choose to drink as adults, will learn to appreciate wine responsibly. In this, the challenge posed by alcohol is similar to much else in life. Work, sex, money and other blessings can be associated with excessive behavior and destructive consequences. The challenge is to keep things in balance and appropriate, to use good judgment and moderation.

Thomas Jefferson said "Good wine is a necessity of life." It certainly adds a dimension to life that I find enjoyable. The history of wine is fascinating, and wine helps remind us of the wonder and mystery of life. Jeff Smith notes that wine is a symbol of community; a fine bottle of wine immediately makes us consider with whom to share it. There can be something quite magical about sharing a bottle of wine with friends around the "community of the table."

Not wanting to sound pretentious, I could simply state that sipping a glass of wine with a meal really does "taste great and is less filling." More people would probably enjoy wine were it not surrounded by so much pretense and snobbery. Such attitudes are off-putting to others, yet I would have to admit to having given as well as received. Pretense and snobbery reflect our insecurity; it is a misguided attempt to feel good about ourselves by acting superior to others by virtue of our knowledge or possessions.¹⁵

In past centuries there was a lot of bad wine around. Nowadays, one doesn't have to study and know a lot about wine to drink good wine. I am a fan of California wine, and it seems to me that the quality of California fruit is so good and wine making skills so high that it's actually somewhat difficult to find a bottle of bad wine. And if we do, it simply helps us appreciate all the good ones more. And a good bottle of wine is defined as one that you like.

Life is short; no one can experience all the good things life has to offer. But if you are acquainted with the joys of wine, then when you lift your glass of wine this holiday season, let your heart be filled with thankfulness for the gift of wine and for the gift of life. Whether future scientific studies confirm the special beneficial qualities of wine or not, you can be sure that such feelings of gratitude are good not only for your mind and body, but also for your soul.

Notes:

1. Burros M. In an About-Face, U.S. Says Alcohol Has Health Benefits. New York Times. January 3, 1996: A1, B6.
2. Matthews T. Britain Raises Safe Drinking Limits. Wine Spectator. February 29, 1996:9.
3. Klatsky AL, Armstrong MA. Alcoholic Beverage Choice and Risk of Coronary Artery Disease Mortality: Do Red Wine Drinkers Fare Best? Am. Journal of Cardiology 1993; 71:467-469.
4. Gronbaek M, Deis A, Sorensen T, Becker U, Schnohr P, Jensen G. Mortality associated with moderate intakes of wine, beer, or spirits. British Medical Journal 1995;310:1165-1169.
5. There is also some current evidence that alcohol has healthful effects on the mind. Dr. Liz Applegate of the University of California at Davis writing in the May 1995 issue of *Runner's World* refers to a study which "tracked the drinking habits of nearly 4,000 twins for 20 years (and) found that those who drank one to two drinks daily maintained better reasoning powers, problem solving and other mental skills than those who abstained."
6. Smith J. *The Frugal Gourmet Cooks With Wine*. New York: William Morrow, 1986, p. 75.
7. Johnson H. *Vintage: The Story of Wine*. New York: Simon and Schuster, 1989, p. 76.
8. Johnson H. p. 81.
9. The scripture St. Thomas Aquinas refers to is Psalms 104:15 "wine maketh glad the heart of man."
10. Robinson J, ed. *The Oxford Companion to Wine*. Oxford: Oxford University Press, 1994, p. 112.
11. Kesby J. *Oxford Companion*, p. 787.
12. The temperance movement in the United States began by urging just that, temperance, but later endorsed total prohibition. Likewise, the movement's original target was distilled spirits, but it later came to include beer and wine. The movement culminated in the passage of the 18th Amendment in 1920 which prohibited "the manufacture, sale, or transportation of intoxicating liquors." No compensation was provided for by the Amendment; most of the California wineries, which had been flourishing, were forced to go out of business. Some few managed to stay in business by producing "sacramental wine," the demand for which greatly increased during prohibition. See Prof. Thomas Pinney in *Oxford Companion*, p. 762.
13. Fitzgerald F. To Your Health? Internal Medicine News. March 15, 1995:14.
14. Dr. Jerry Avorn an associate professor of medicine at Harvard Medical School in a letter to the editor in the August 6, 1996, New York Times writes that although candidate Bob Dole saw the movie "Independence Day" and "proclaimed it to be the kind of good-values movie Hollywood should be producing for the nation's families" he wonders about Senator Dole's assessment. Dr. Avorn explains: "The daredevil pilot who saves humanity by maneuvering his jet brilliantly through the aliens' defenses does so while drunk, his alcoholic stupor turned into awesome agility by many cups of strong coffee. The other hero is a lovable underachiever who devises an ingenious plan to defeat the invaders only after his reasoning powers get a fifth or so of lubrication. I am not opposed to the enjoyment of alcohol or its depiction on screen...But isn't it thoughtless, in a film clearly for pre-teens and adolescents, to have heroic acts appear to depend on alcohol? The plot could have worked as well or better" with other scenarios and "our understanding of heroism might have been broadened, instead of cheapened." Dr. Avorn goes on to note that "politically correct art can be terrible" but he questions if it's a "good idea to make a movie for children showing that driving skill and brilliant reasoning are the consequences of getting drunk."
15. Wine snobbery is very old. Some have suggested that it began during the Roman Empire when wine was seen as the drink of the noble and civilized Romans while beer or ale was the drink of the Gauls who were seen by the Romans as uncivilized barbarians. Francophiles, however, point to the evidence that suggests that vineyards were present and wine was being made in the region of France before the Romans arrived there.

Medicine in the News

Health Care Access Foundation

As of November 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,833 medically indigent persons, received 22,312 applications and enrolled 43,507 persons. This program has 1,756 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Laboratory Achievement Program for Waived/PPM Laboratories Introduced

A new Laboratory Achievement program, which features educational products and a Certificate of Achievement for laboratories or other facilities involved with Waived or Provider-Performed Microscopy (PPM) testing, was unveiled by the Commission on Office Laboratory Accreditation (COLA) October 30, 1996. The development of the program is in response to healthcare professionals desiring to demonstrate quality through continuing education and quality testing to ensure excellent patient care.

The Laboratory Achievement program includes:

- *Preparation of the Health Care Financing Administration (HCFA) forms necessary for a new Waived/PPM certificate for the Laboratory Director's signature,
- *Individualized Procedure Manual based on the facility's test menu,
- *Quality Control and Quality Assurance forms,
- *Quality Assurance Plan,
- *Training Guides for testing personnel,
- *COLA's *OSHA Guide to Bloodborne Pathogens* booklet,
- *Two-year subscription to bi-monthly newsletter, *COLA Update*,
- *Self-Assessment Questionnaire for Waived/PPM testing,
- *Evaluation of the completed Self-Assessment Questionnaire,
- *Personalized, step-by-step feedback on how to improve the laboratory practices based on the Self-Assessment, and
- *Access to COLA's Customer Service technical hotline.

The Laboratory Achievement program is valuable to physician office laboratories, ambulatory surgical centers, community clinics, hospital-affiliated laboratories, industrial laboratories, managed care facilities, student health services, home health agencies, hospices, skilled nursing facilities and other point-of-care

testing facilities.

J. Stephen Kroger, M.D., F.A.C.P., COLA's Chief Executive officer states, "Testing facilitates need a competitive advantage as third party payers and consumers alike are demanding quality. COLA will be among the first to provide recognition to excellent laboratories performing testing at the Waived and PPM levels. As one of the leading accreditation organizations in the country, COLA made the decision to fill this gap with a program that enables a testing facility to be a leader in healthcare."

Information on COLA's Laboratory Achievement program, as well as other physician and laboratory services, is available by calling 1-800-981-9883.

AMA Reaffirms Commitment to Access to Quality Care for All Statement attributable to:

Daniel H. Johnson, Jr., MD, AMA President

"The AMA welcomes the Kaiser Family Foundation study on uninsured Americans, published in JAMA October 25, 1996. It makes an important contribution to our understanding of the uninsured population and demonstrates that it is critical to monitor the state of access to health care in America on a continuing basis.

"The AMA is committed to access to health care for the uninsured. Universal access continues to be our ultimate goal. We celebrated a positive step toward that goal when the Kassenbaum-Kennedy bill, which assures insurance portability for workers changing jobs and continued coverage for patients with pre-existing conditions, was signed into law earlier this year. Other incremental steps will need to be taken next Congress.

"Meanwhile, in order to keep the insured problem to a minimum, we are committed to Medicare reform, to preserve the program for all generations, and Medicaid reform, to provide a necessary safety net for the needy and most vulnerable in our society.

"There is no easy solution to the problem of the uninsured. However, there are many current AMA policies we would like to see implemented to ease the problem. For example, we would like to see an extension of employer-provided insurance coverage for up to four months following unemployment. And because many of the uninsured are young adults, we encourage the health insurance industry and employers to make extended health coverage available under the parents' family policy until age 28.

"Finally, our commitment to charity care continues. In 1994, the physicians of America contributed \$21 billion in charity care to their patients who needed it most and will continue to donate their services in order to increase access to medical care for the uninsured. While the problems of the uninsured will not be solved overnight, we believe the ultimate goal of universal access must be achieved - one step at a time."

Information provided by AMA Fed-Net.

104th Congress Concludes With a Flurry of Legislative Activity; Solid Gains for Medicine and Patients - Groundwork Laid for Further Gains in 1997

In early November, the 104th Congress adjourned for the remainder of the year after concluding its work on a variety of appropriations bills and several other outstanding issues. The legislative and regulatory successes of the AMA during the last two years make this one of the most meaningful Congresses in recent history. These include:

ANTITRUST RELIEF: Coming on the heels of an aggressive legislative campaign which was initiated and sustained by the AMA's work with Rep. Henry Hyde on HR 2925 (the Antitrust Health Care Advancement Act of 1996), the Federal Trade Commission on August 28th issued their "Statements of Antitrust Enforcement Policy in Health Care." The enactment of these new guidelines will provide physicians with a rich source of tools to form different kinds of networks in order to respond to the many changes which have taken place in the health care marketplace. At the time these new guidelines were released, the AMA had secured more than 150 sponsors for HR 2925, and the bill had been approved overwhelmingly by the House Judiciary Committee and was awaiting consideration by the full House of Representatives.

FEDERAL HEALTH INSURANCE REFORMS: The Congress and President this year enacted the so-called Kassebaum-Kennedy health insurance reform law which: 1) extends to patients portable insurance coverage, 2) provides guaranteed issue for small businesses, 3) places limits on restrictions based upon pre-existing medical conditions, and 4) includes a demonstration project to determine the effectiveness of Medical Savings Accounts (MSAs). While the legislation is not a cure-all for our health care system's ills, it does lay the groundwork for an improved health care delivery system and for future legislative action.

FRAUD AND ABUSE: Contained within the provisions of the Kassebaum-Kennedy legislation are new tools to assist government agencies to catch truly fraudulent health care providers while ensuring that providers who make innocent mistakes or billing errors will not be unfairly punished. Criminal allega-

tions must be proven to be knowing and willful violations of the law. Similar standards apply to the imposition of civil monetary penalties. In addition, the AMA won the right for physicians to obtain binding advisory opinions to determine in advance whether or not a particular business arrangement is in compliance with these new, complex fraud and abuse statutes.

ADVISORY COMMISSION ON CONSUMER PROTECTION AND QUALITY: Over the last few years, the AMA has fiercely pursued an agenda which heightens governmental awareness of the need for patient protections in the new era of managed care. In August, President Clinton announced the formation of the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. The President's charge to this Commission is for it to assess changes occurring in the health care system and "recommend measures that may be necessary to promote and assure health care quality and value, and protect consumers and workers in the health care system."

MENTAL HEALTH INSURANCE COVERAGE PARITY: As part of the final push toward closure of the Second Session of the 104th Congress, the House and Senate agreed to an amendment, since enacted, which will require that aggregate and annual payment limits on insurance policies be the same for mental and physician illnesses for all health plans that provide mental health benefits. This requirement will go into effect on January 1, 1998. This so-called "mental health parity" amendment represents a strong first-step toward equalizing such coverage and providing some financial protections to those individuals who suffer from chronic or catastrophic mental conditions.

"DRIVE-THROUGH DELIVERIES": This year, the Congress also agreed to legislation which will prohibit the insurance company practice known as "drive-through deliveries." Under the new law, the decision as to how long a mother and her newborn child will remain in the hospital will be made by the mother and her physician. This new law represents a strong first-step by the federal government toward assuring that cost containment will not be allowed to be the primary or sole consideration in determining how and which health care services will be paid for in the new era of "managed care."

CURBING YOUTH SMOKING: Since 1989, the AMA has been involved in a national campaign combating youth smoking and has tried to heighten the public's and the government's understanding of the need to regulate tobacco in order to curb the industry's promotion, marketing and sales efforts which are aimed directly at children. This summer, President Clinton announced a series of measures intended to educate children on the hazards of smoking and to make it more difficult for children to gain access to cigarettes. These new rules also will regulate tobacco advertising

which is geared toward children in an attempt to reduce the appeal of smoking.

MEDICAL RESEARCH: Even during this era of fiscal belt-tightening, the AMA has been aggressively pursuing additional federal funds for medical research. We are very pleased that the National Institute of Health (NIH) received an increase in its budget for medical research for the 1997 Fiscal Year. The AMA also played a key role in preserving federal funding for the Agency for Health Care Policy and Research (AHCPR).

METHOD PATENTS: Working with a coalition of medical specialty groups, the AMA helped craft an agreement with pharmaceutical and biotechnology groups on compromise language which was enacted into law clarifying that physicians may not be sued for patent infringement in this area.

GAG CLAUSES: Finally, legislation to ban "gag clauses" in physician contracts also saw a great deal of discussion and debate during the 104th Congress, thanks, in great measure, to Iowa Congressman Greg Ganske, MD. This legislation would make it unlawful for any health plan to interfere with or restrict medical communications between physicians and patients and would prohibit health plans from taking any adverse action against a physician on the basis of a medical communication between a physician and his or her patient. Enactment of "anti-gag" legislation by the Congress early next year would demonstrate its commitment to protecting patients without disrupting legitimate managed care utilization management and quality assurance activities. - *Information provided by AMA Fed-Net.*

Election Update: 12 Physicians/Spouses in 105th Congress

Late election returns indicated that incumbent Rep. Nancy Johnson (R, Connecticut) a physician's spouse, narrowly won re-election with 113,022 votes to her opponent's 110,840. Her victory means 12 physicians and physicians spouses will serve in the US House of Representatives in the 105th Congress, joining Sen. William Frist (R, Tennessee) who was elected in 1994.

The other winners:

- * Vic Snyder, MD (D, Arkansas)
- * Xavier Becerra, spouse, (D-California) incumbent
- * Dave Weldon, MD (A-Florida) incumbent
- * Greg Ganske, MD (A-Iowa) incumbent
- * John Cooksey, MD (A-Louisiana)
- * Marge S. Roukema, spouse (R-New Jersey) incumbent
- * Tom Coburn, MD (A-Oklahoma) incumbent
- * Ron Paul, MD (A-Texas)
- * Tom Davis, spouse (D-Virginia) incumbent
- * James McDermott, MD (D-Washington) incumbent
- * Barbara Cubin, spouse (R-Wyoming)

In referendum and initiative voting around the nation, California voters rejected two propositions that would have imposed new controls over health maintenance organizations. Voters in California and Arizona approved the legalization of marijuana for medical uses. - *Information provided by AMA Fed-Net.*

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AMS Newsmakers

Dr. John E. Alexander Jr., of Magnolia, was installed as president of the Arkansas Academy of Family Physicians at its Annual Scientific Assembly in Little Rock recently.

Dr. Shabbir A. Dharamsey, a Pine Bluff cardiologist, has been elected to serve as a member of the American Heart Association Board of Directors for the Arkansas Affiliate.

Dr. John Richard Duke, chief resident at the Department of Family and Community Medicine at UAMS, is among 20 recipients nationwide of a \$2,000 award from the American Academy of Family Physicians to help finance his graduate medical training in family practice. He was selected from a field of 157 candidates on the basis of scholastic achievement, leadership qualities, community involvement and exemplary patient care.

Dr. W. Ducote Haynes, a radiation oncologist and medical director at CARTI/Searcy, recently retired after 20 years of practicing at CARTI. He was one of the first physicians at CARTI in Little Rock when the facility opened in 1976.

Dr. P. Reddy Tukivakala, a physician of internal medicine in Helena, has been elected by the Board of Directors of the Delta Health Alliance, a local managed care physician/hospital organization, to serve as president of the organization until December 1997.

Dr. Herbert Wren, a Texarkana retired thoracic and vascular surgeon, was recently elected president of the Tulane University Surgical Society. Dr. Wren, who is now a Methodist minister, practiced medicine for forty years.

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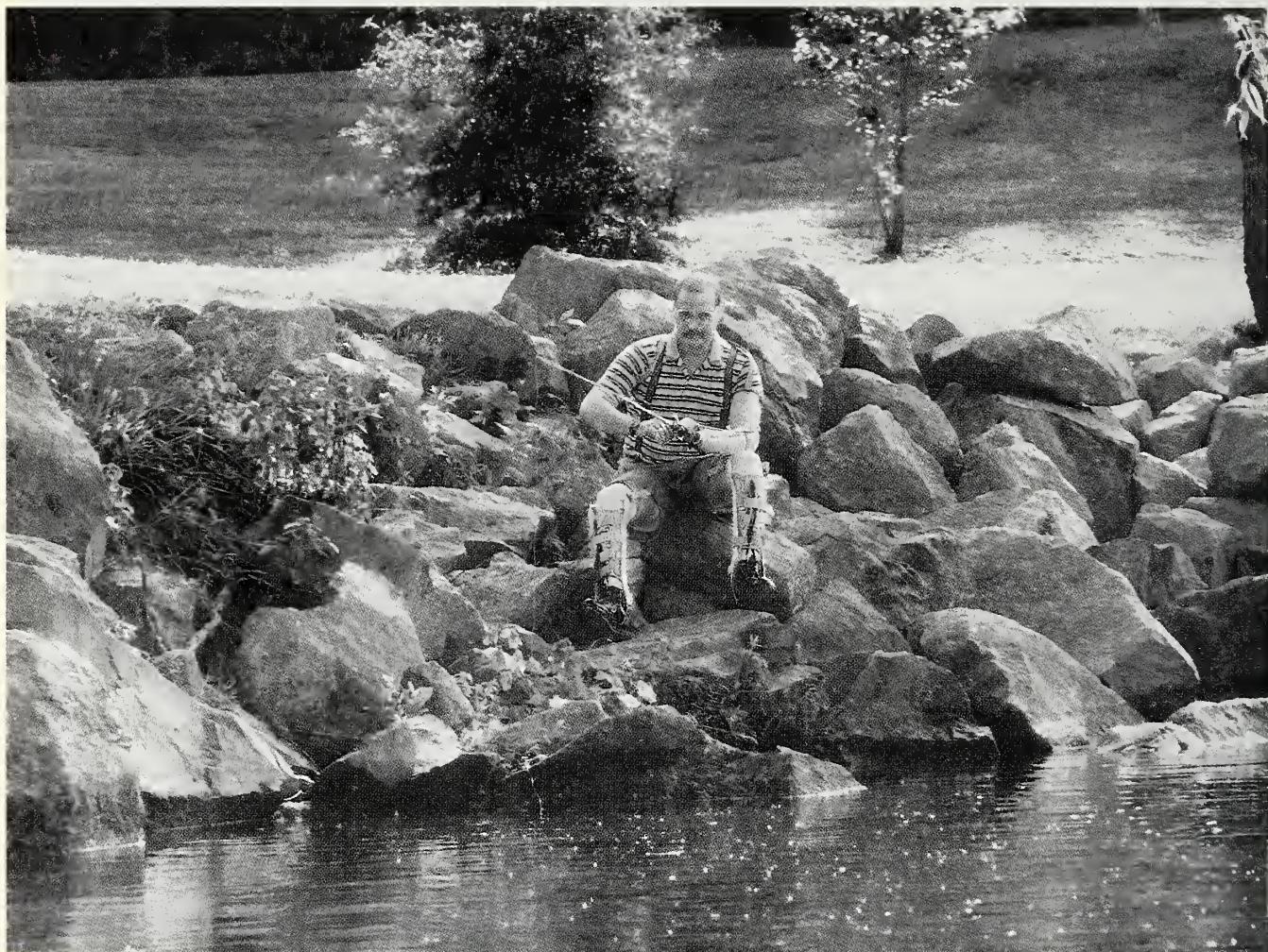
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New Member Profile

Roy M. Blackburn, M.D.



PROFESSIONAL INFORMATION

Specialty: Physical Medicine and Rehabilitation

Years in Practice: Three

Office: Texarkana, Texas

Medical School: American University of the Caribbean,
Montserrat, British West Indies, 1987

Internship: St. Vincent's Medical Center, Staten Island, NY, 1988

Residency: Emory University, Atlanta, Georgia, 1993

Affiliates/Organizations: American Academy of Physical Medicine & Rehabilitation, American
Medical Association and Southern Medical Association

PERSONAL INFORMATION

Date/Place of Birth: August 3, 1958, in Jacksonville, Florida

Hobbies: Music and traveling

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: In music

Figure I most identify with: Beethoven

Worst habit: Not filling out forms

Best habit: Filling out forms when returned

Behind my back they say: Where's his front?

Most valued material possession: Guitar

People who knew me in medical school, thought I was: Compulsive

The turning point of my life was when: I achieved my second board certification

Favorite vacation spot: Budapest, Hungary

One goal I haven't achieved, yet: Speaking Hungarian fluently

One goal I am proud to have reached: Solo practitioner

Favorite Childhood Memory: My great aunt's tapioca

When I was a child, I wanted to grow up to be: An adult

One of my pet peeves: People who cut to the front of the line

First job: Selling lemonade

Worst job: Being an intern

One word to sum me up: Multifarious

If you would like to appear in *New Member Profile* or *Member Profile*, contact Tina Wade at AMS at (501) 224-8967 or 1-800-542-1058.

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Changes in Galactosemia Screening Program

Robert West, M.D.*

Arkansas neonates have been screened for galactosemia since January of this year. The primary screening methodology has consisted of quantitative fluorometric assay for both total galactose and galactose-1-phosphate uridylyltransferase (GALT). Previous reports in *The Journal of the Arkansas Medical Society* have reviewed the relevant disorders of galactose metabolism and discussed the cutoff values used in the Arkansas screening program. The following summarizes findings to date and outlines recent changes in procedures and reporting of results.

Between January 1, 1996 and September 30, 1996, a total of 25,807 satisfactory specimens were received for initial screening. Of these, 611 were reported as "partial positive" using the cutoff values in place during that period. An additional 24 specimens were reported as "positive," i.e. total galactose of ≥ 15 mg/dL, GALT of ≤ 3.5 U/gHb, or both.

Follow-up of the abnormal reports during this period resulted in detection of one case of classic galactosemia as well as four probable Duarte variant-classic galactosemia (D/G) compound heterozygotes. The infant with classic galactosemia had screening results that were positive for both total galactose and for GALT. This baby is being followed at Arkansas Children's Hospital and has had no significant morbidity to date. As for the presumed D/G infants, three had "positive" newborn screening results, while the other one had "partial positive" initial results.

A serious problem throughout the first nine months of screening was the extremely high number of partial positive results reported. Raising the cutoff

value for total galactose to 10 mg/dL earlier this year did not sufficiently alleviate the problem. Therefore, the Department of Health worked with both the Genetics Program at ACH as well as the laboratory system manufacturer (Isolab) to develop an innovative solution. These efforts culminated in changes in screening cutoffs and methodology that went into effect in mid-October. Key changes include the following: specimens having total galactose values of 10-15 mg/dL and GALT values >5.0 U/gHb are now reported as "normal," while specimens with galactose values in the same range, but with GALT values of 3.6-5.0 U/gHb, are assayed for galactose-1-phosphate (gal-1-P). A gal-1-P value of ≥ 4 mg/dL defines a "partial positive" result, while samples with a gal-1-P of less than 4 mg/dL, galactose 10-15 mg/dL, and GALT 3.6-5.0 U/gHb are now reported as "normal."

The gal-1-P assay is performed via the same system utilized for galactose, GALT, and phenylalanine determinations. The Supervisor of the Clinical Chemistry Section at ADH was instrumental in modifying the system to permit gal-1-P testing. Interestingly, Arkansas is the first state to incorporate automated filter paper assay for gal-1-P into its galactosemia screening program, and it appears likely that other states will follow.

The new screening and reporting system will markedly reduce the volume of partial positive results and thereby prevent unnecessary follow-up with its attendant costs and inconveniences. At the same time, sensitivity of the screening process is unlikely to be compromised. Gal-1-P determination should be most useful in identifying babies at higher risk for significant transferase abnormalities, particularly low-activity variant states.

* Robert West, M.D., is a Pediatric Medical Consultant with the Arkansas Department of Health.

<u>Galactose (mg/dL)</u>	<u>GALT (U/gHb)</u>	<u>Specimen Integrity</u>	<u>Gal-1-P (mg/dL)</u>	<u>Interpretation</u>
< 10	> 3.5	—	—	Presumed normal
10 - 15	> 5.0	—	—	Presumed normal
10 - 15	3.6-5.0	—	< 4.0	Presumed normal
< 15	≤ 3.5	Unacceptable	Any	Inconclusive
10 - 15	3.6-5.0	—	≥ 4.0	Partial positive
Any	≤ 3.5	Acceptable	Any	POSITIVE SCREEN
> 15	Any	Either	Any	POSITIVE SCREEN

<u>Interpretation</u>	<u>Action</u>
Normal	None
Inconclusive	Filter paper repeat
Partial positive	Filter paper repeat; institute lactose-free formula
POSITIVE	Immediately institute lactose-free formula; consult with pediatric geneticist; submit whole blood and urine for confirmatory testing

The table summarizes the revised reporting scheme as well as recommendations for follow-up. As always, consultation for individual patients is available through the Arkansas Genetics Program by calling 320-2966.

Information regarding the newborn screening program may be obtained by calling Cheryl Battle, State Genetics Coordinator, at 1-800-482-5400, ext. 2189.

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Pseudomembranous Colitis

William E. Golden, M.D.*

Nena Sanchez, M.S.**

Beth Pitts, M.D.***

Pseudomembranous colitis, also known as antibiotic-associated colitis (AAC), is a serious condition which especially afflicts the elderly and the debilitated. It commonly occurs four to nine days after the start of antibiotic therapy but can occur, in up to 20% of cases, as late as six weeks after receiving such therapy. This colitis can also be associated with anti-neoplastic drugs or metabolic insult to the patient. It commonly affects the rectosigmoid area of the colon although 10-20% of cases can occur in isolated proximal segments of the colon.

AAC is not an invasive infection but rather the result of toxins (Toxin A & B) produced by the organism *Clostridium difficile*. *C. difficile* is a spore forming, gram positive, obligate anaerobe. It is present as normal flora in 3% of ambulatory adults, 60-70% of newborns, and 10-30% of hospitalized patients: one survey found 15% of inpatients were asymptomatic carriers of this organism in their stool.

C. difficile can be transmitted nosocomially. The spores of this organism can serve as fomites in the environment for months. Enteric isolation procedures are recommended for all symptomatic patients and invasive instruments should be cleansed with materials that can deactivate the spores.

Recent literature suggests that stool specimens for enteric pathogens or ova and parasites rarely yield significant findings after the patient has been in the hospital three days. Nevertheless, these laboratory tests commonly are ordered for patients who develop diarrhea while in the hospital. Studies indicate that such diagnostic efforts are worthwhile in ambulatory pa-

tients, but they do not make sense for the patients who have been in the hospital for a relatively brief period of time. On the other hand, patients who develop nosocomial diarrhea should have these specimens tested for *C. difficile* toxin which is a more common entity in patients who are hospitalized.

Not all diarrhea following antibiotic therapy is caused by *C. difficile*. Antibiotic-associated diarrhea (AAD) is a self limited condition that resolves with fluid and electrolyte support and the cessation of antibiotic therapy. Patients with antibiotic-associated colitis (AAC), on the other hand, can have high white counts, fever, pain, abdominal tenderness and/or a diminished albumin. Some present with an acute abdomen or toxic megacolon without diarrhea. Stools for white cells are positive in only 30-50% of cases. Eighty-five percent of patients with AAC have positive stool cultures for *C. difficile*, but as noted earlier, such cultures can be positive in unafflicted patients. Immunoassays for toxins are present in 95% of patients with antibiotic-associated colitis. Tissue cytotoxic assays are more sensitive than counter electrophoresis for detecting toxins. Latex agglutination assays for toxins lack specificity (high false positive rate) and are only suggestive of colitis, much like a positive stool culture; these latex agglutination assays should therefore be avoided. Difficult diagnostic cases probably require endoscopy.

Up to 25% of AAC require no therapy. The drug of choice for mild to moderate episodes is oral metronidazole. This medication is less expensive than oral vancomycin and avoids development of fecal enterococcal resistance to vancomycin which is common after administration of this drug. IV vancomycin and metronidazole should be avoided, as intraluminal concentration of these medications is not assured. Oral vancomycin, when used for severe cases, should be

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Pseudomembranous Colitis (N=425)

<u>Treatment</u>	<u>Frequency</u>	<u>Percent</u>
Oral Metronidazole - first agent	252	59.3%
IV Vancomycin	25	5.9%
Oral Vancomycin - first agent	88	20.7%
IV Metronidazole	55	12.9%
Antiperistaltic Agents	47	11.1%
Enteric Isolation	38	8.9%

Diagnostic Techniques*

<u>Diagnostic Technique</u>	<u>Number of Hospitals</u>	<u>Percent</u>
Immunoassay for Toxins	24	51.1%
Tissue Cytotoxicity	2	4.3%
Latex Agglutination	16	34.0%
Immunoassay for Antigens	5	10.6%

*Thirty (30) hospitals did not report their methods

given at 125 mg. p.o. q.i.d. and not 500 mg. p.o. b.i.d. This lower dose is as effective as the higher doses and is less expensive. If necessary, these medications can be given by NG tube in patients unable to tolerate oral liquids. For patients with adynamic ileus, oral metronidazole will not work and treatment should focus on NG vancomycin, vancomycin enemas, and/or IV vancomycin. Many of these patients fare poorly and need colonic resection of the affected bowel.

Before the era of antibiotic treatment for AAC, many patients received binding resins such as cholestyramine. These agents should be used only in mild cases and avoided when patients receive oral vancomycin which binds to the resin. Lomotil and other antiperistaltic agents should be avoided, lest retained colonic contents pool toxic fluid and worsen the patient's overall medical condition.

AFMC reviewed charts for 100% of Medicare patients hospitalized from October 1994 through September 1995 who received a discharge diagnosis of pseudomembranous colitis (N=425). Eight percent (33) of these cases did not have diarrhea documented during the hospitalization; nevertheless, 30 of these cases received antibiotic treatment. It appears that these patients may have received diagnostic tests and treatment without evidence of clinical disease.

Fifty-nine percent (252) received oral metronidazole as first line therapy, but 21% (88) received oral vancomycin as first therapy. Patients with diarrhea who were treated in larger hospitals were more likely to receive the preferred oral metronidazole than were patients treated in facilities with less than 100 beds (59% vs 40%, respectively, p-value=.01). An additional

6% (25) were given IV vancomycin. Thirteen percent (55) were treated with IV metronidazole. Forty-seven cases or 11.5% received antiperistaltic agents (Lomotil or Imodium) during their therapy. Only 9% (38) were placed under enteric isolation.

AFMC surveyed the techniques used to diagnose pseudomembranous colitis. Twenty-four hospitals used immunoassays for toxins. Two facilities employed the tissue cytotoxicity assay. Sixteen hospitals of varying bedsize used the less specific latex agglutination test and five used antigen immunoassays. Thirty hospitals did not report on their diagnostic technique.

Conclusion

1. Pseudomembranous colitis or antibiotic-associated colitis (AAC) frequently afflicts the elderly and the debilitated. Enteric precautions, used in

only 9% of these cases, can prevent nosocomial transmission.

2. Oral metronidazole is the drug of choice in terms of effectiveness and cost. It avoids creation of vancomycin resistant enterococci. Only 59% of cases received this treatment first, and smaller hospitals used this medication first 40% of the time.

3. Stool culture, latex agglutination and antigen assay tests can detect carrier status and other cross reactive markers. Toxin immunoassays and tissue cytotoxicity assays are more accurate in diagnosing the condition.

4. Hospitals could save money and increase diagnostic accuracy by adopting the following procedures for nosocomial diarrhea:

A. Process stool specimens for enteric pathogens only for patients hospitalized for three days or less.

B. For patients hospitalized for more than three days, test stool specimens only for *C. difficile* toxin - unless hospital conditions indicate an epidemic bacterial event.

5. Positive diagnostic tests without signs of clinical disease can signal carrier status that may not benefit from therapy. In our study population, 30 of 33 cases without diarrhea received therapy. Diarrhea after antibiotic administration may not reflect AAC but rather a non-specific antibiotic-associated diarrhea. Mild cases of this disorder will respond to the elimination of antibiotics with fluid and electrolyte support.

6. Antimotility agents such as Imodium or Lomotil should be avoided in antibiotic associated colitis. Eleven percent of cases in our population received these agents.

7. IV metronidazole or vancomycin should be avoided except in adynamic ileus because luminal penetration of antibiotic is not assured. IV vancomycin is the preferred agent if parenteral therapy is appropriate. Approximately 20% of cases received intravenous therapy.

Suggestions

1. Hospitals should review their diagnostic testing for antibiotic-associated colitis (AAC) to reflect sensitivity, specificity and relative costs. Hospitals using latex agglutination or antigen immunoassays should consider changing to toxin immunoassay diagnostic techniques.

2. Hospitals should review patients discharged with the diagnosis of antibiotic-associated colitis (AAC) to verify: 1) the presence of colitis as opposed to antibiotic-associated diarrhea, 2) the appropriate use of antibiotics, and 3) avoidance of antiperistaltic agents. Patients without diarrhea might not benefit from testing or therapy.

3. Patients with antibiotic-associated colitis (AAC) should be placed in enteric isolation.

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The advertisement features a stylized graphic of a building facade on the left, composed of vertical columns of dots. To the right of the graphic, the word "LOCATION" appears twice in a bold, sans-serif font, with the second instance slightly larger. Below this, the text "LOCATION, LOCATION!" is written in a larger, more dynamic font. Further down, the text "Office Space for Lease or Sale" is followed by "1795 square feet (aprox.)". At the bottom, the address "Doctors Park Bldg. Suite 350" is followed by "Baptist Medical Center" and "campus, Little Rock, AR". Finally, contact information is provided: "Call: David Carrico, MD" and the phone numbers "223-7199 or 225-3681".

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A Pulmonary Monitoring and Treatment Plan for Children with Duchenne-type Muscular Dystrophies

Robert Hughes Warren, M.D.*
Sheila Horan Alderson, B.S.**

Abstract

The Pulmonary Medicine Section of the Department of Pediatrics of the University of Arkansas for Medical Sciences has recently developed an association with the Muscular Dystrophy Association Clinic held at Arkansas Children's Hospital. The slowly progressive, insidious onset of pulmonary problems associated with Duchenne-type muscular dystrophies and other degenerative muscle disorders indicated a need for an aggressive monitoring and treatment plan for these children and their caregivers. We have developed a Respiratory Care Handbook for families with information on the pulmonary consequences of these diseases including pathophysiology, pulmonary function tests, respiratory treatments including mechanical ventilatory support, and anticipation and prevention of pulmonary crises. In addition, we have introduced for the physician a formal monitoring and treatment regimen driven by changes in the vital capacity lung volume. The substance of this plan is presented in this manuscript.

Introduction

In the state of Arkansas, children with various forms of muscular dystrophy are followed through regional Muscular Dystrophy Association (MDA) Clinics in combination with their primary care physician. The Department of Pediatrics Pulmonary Medicine Section has recently associated with the MDA Clinic at Arkansas Children's Hospital. This association has resulted in identification of a need for these patients and their families that had not been previously addressed. The need is a thorough, formal presentation of and treatment regimen for the inevitable pulmonary consequences of the Duchenne-type muscular

dystrophies and other forms of muscle disease that affect the cardiorespiratory system.

We have prepared a presentation designed to target pulmonary issues. We focus on early education structured in a clinical setting with verbal and written information about the lungs and the progressive nature of muscle weakness. We emphasize the value of regular monitoring of pulmonary function. Knowledge can empower families during the difficult course of this disease and can assist them when choosing therapy modalities. Crisis management of respiratory and other late complications can be avoided. Understanding and compliance with medical recommendations can be enhanced with a comprehensive presentation of pulmonary issues. We have produced a Respiratory Care Handbook filled with information specific to the pulmonary needs of a child with chronic, progressive muscle weakness. This handbook is given to the families as soon after diagnosis as possible.

The purpose of this manuscript is to describe the pulmonary pathophysiology of Duchenne-type muscular dystrophy and to present a pulmonary monitoring and treatment plan. We will briefly provide an historical perspective of scientific study of chronic muscle disorders and a systematic approach to pulmonary history and physical examination.

History

The progressive muscle disorders were first studied in the mid nineteenth century primarily in France and Germany. W. Erb initially developed the concept of a group of diseases that were due to primary degeneration of muscle fiber, rather than secondary to pathologic change in its nerve supply. A. von Eulenberg and R. Cohnheim noted the absence of change in the central nervous system and the presence of fatty tissue interspersed between the muscle bundles. The first complete description of pseudohypertrophic childhood muscular dystrophy based on clinical and histologic studies was presented by a

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French scientist, G.B. Duchenne in 1868. W.R. Gowers provided the first comprehensive description of Duchenne's dystrophy in the English language in 1879.

Diagnosis

Accurate diagnosis of muscular dystrophy includes a carefully obtained history and a well performed physical and neurological examination. Laboratory tests most helpful in diagnosis include serum enzyme levels (creatine phosphokinase, aldolase, lactic dehydrogenase, and glutamic-oxaloacetic and glutamic-pyruvic transaminases), electromyography, and muscle biopsy.

Following an accurate diagnosis, the comprehensive management of a child with a chronic neuromuscular disorder begins with the development of short and long term goals. These goals must include the long term predictions for progressive pulmonary dysfunction that accompanies the natural decline of muscle power in these children.

Pulmonary Pathophysiology

Duchenne-type muscular dystrophies impose a restrictive dysfunction of the respiratory system. Progressive respiratory muscle weakness and mechanical factors involving the chest wall and spine both contribute to the development of chronic alveolar hypoventilation, hypoxemia, and inevitably respiratory failure.

The restrictive pulmonary dysfunction is defined by a reduction in absolute lung volumes, including total lung capacity, vital capacity, functional residual capacity, and expiratory reserve volume. For children with Duchenne muscular dystrophy, the vital capacity plateaus usually between 10 and 14 years of age.¹ A respiratory management plan is critical to an attempt to slow the decline of vital capacity which can be as much as 20% per year for children who do not receive adequate respiratory treatment.

Chronic alveolar hypoventilation associated with a primary diagnosis of Duchenne-type muscular dystrophy is caused by decreased lung expansion due to musculoskeletal limitations of the chest wall. As muscles in the neck, thorax, and abdomen deteriorate, the patient will develop a rapid, shallow respiratory pattern.² Decreased lung compliance and microatelectasis develop quickly in the absence of effective deep inspirations or mechanically assisted hyperinflations. Chronic hypoinflation of the lung leads to alveolar collapse and may result in permanent loss of lung and chest wall elasticity.³ Further mechanical deterioration of lung function can occur with repeated acute respiratory tract infections.

The restrictive lung dysfunction in Duchenne-type muscular dystrophy can lead to alterations of central nervous system respiratory control mechanisms.⁴ Short

periods of oxygen desaturation and hypercapnia occur usually during REM sleep when ventilatory responses are diminished. Repeated episodes of hypercapnia during sleep can result in significant changes in blood gas values detected when the patient is awake. An elevated bicarbonate can be indicative of chronic renal compensation for nocturnal hypercapnia. Unless treated, hypercapnia and hypoxemia can lead to the development of cor pulmonale. Normocapneic hypoxemia is common and may be due to decreased oxygen diffusion across the alveolar-capillary membrane secondary to microatelectasis and pulmonary fibrosis.

It is tempting at this point in patient care to administer supplemental oxygen to correct the hypoxemia. However, the primary problem is hypoventilation, especially during sleep. Continuous oxygen therapy may depress ventilatory drive, thereby exacerbating alveolar hypoventilation and hasten respiratory decline.⁵ Hyperinflation therapy in the form of mechanical ventilatory assistance can minimize or eliminate the periods of hypercapnia and hypoxemia during sleeping hours.

Therapy Applications

When the vital capacity falls within a range of 75 to 61% of predicted for the patient's current height and weight, deep breathing exercises using an incentive spirometer can be introduced to sustain inspiratory volumes. Mechanically assisted hyperinflation therapy can be introduced when the vital capacity falls within a range of 60 to 41% predicted. This therapy can reverse the alectatic process and transiently improve pulmonary compliance.

Mechanically assisted volume ventilation by mask during sleeping hours may be indicated when the vital capacity falls to 40% predicted or less. As the vital capacity diminishes, mechanical assistance can be increased as needed during waking hours. Airway connection can range from a simple mouthpiece to a custom fabricated oral-nasal interface to a tracheostomy with a Passy-Muir valve for vocalization.⁶

Significant curvature of the spine develops in many children with chronic muscle disorders; affecting 90% of children with Duchenne-type muscular dystrophy and greater than 90% of children with severe early-onset spinal muscle atrophies. Corrective spinal surgery can be offered to these patients for the purposes of straightening the spine. This can result in a decrease in the rate of decline of the vital capacity from 20% annually without surgery to 5% annually following surgery.⁷ Spinal stabilization allows the child to maintain a comfortable seated position for continued wheelchair mobility and prevents a bedridden existence.

Surgery should be performed when the lungs are at least risk for post-operative pulmonary complica-

tions. Other considerations as to the timing of the surgery are: vital capacity, degree of curvature of the spine, age of the child, maximum height of the child at the time spinal stabilization is considered, and the number of recurrent pneumonias and frequency of atelectasis.

Pulmonary Evaluation

A thorough pulmonary history must be obtained soon after diagnosis. Inquiries regarding the newborn period should include the presence or absence of: prematurity, hyaline membrane disease, oxygen requirements over 30 days in duration, bronchopulmonary dysplasia, number of days on mechanical ventilatory support, tracheomalacia, laryngomalacia, meconium aspiration, or gastroesophageal reflux.

Inquiries regarding the infancy and early childhood period should include the presence or absence of: recurrent lower respiratory infections, atopy, wheezing, sleep disturbances, gastroesophageal reflux with aspiration, constipation, upper respiratory infections related to recurrent ear or sinus infections, age appropriate activity, exercise tolerance, active or passive tobacco smoke, or exposure to potential environmental irritants to the lung.

A physical examination with a pulmonary focus should include: segmental auscultation, visual inspection of ribcage and abdomen movement with breathing, demonstration of cough effort, examination of extremities for clubbing, cyanosis, or edema, inspection of ears, nose, and throat, and visual inspection of the spine for any curvature.

Pulmonary Function Testing

Objective information regarding the current status of the lung should be obtained with pulmonary function testing (PFT). When data and physical examination demonstrate a decline, we initiate appropriate ventilatory assistance well in advance of potential pulmonary crises. For children under the age of 5 years who are unable to perform specific ventilatory maneuvers required for routine spirometry, we obtain a capillary blood gas, pulse oximetry, negative inspiratory force, and breathing pattern analysis.

Children, 5 years or older, can usually cooperate and have enough muscle strength to perform the maneuvers required for routine spirometry. Essential components of routine spirometry are: forced vital capacity (FVC), forced expiratory volume in 1 second (FEV₁), and maximum forced expiratory flow (FEF_{max}).

At Arkansas Children's Hospital, pulmonary function testing is performed by registered technologists who specialize in pediatric testing techniques. Explanation of tests, demonstration, and practice maneuvers can improve performance in children with chronic

muscle weakness disorders. Spirometry can be performed sitting or standing without effect on results. Care should be taken in maintaining the trunk in an upright position with the head erect and nose clips in place.⁸

A slow vital capacity maneuver may be easier to perform for children with advanced thorax and abdomen muscle weakness. This maneuver will not provide flow characteristics of the airways but is very efficient in providing definition of the primarily restrictive lung dysfunction of the Duchenne-type muscular dystrophies.

Measurement of negative inspiratory force using a simple pressure manometer can provide objective information regarding the strength of the child's cough effort. This measurement is a valuable tool when evaluating children unable to perform the FVC maneuver.

A history of sleep disturbances may warrant an overnight pulse oximetry study and capillary blood gas. These evaluations will determine the frequency and duration of oxygen desaturations and concomitant hypercapnias evidenced by elevated bicarbonate. This information can assist in planning when to initiate mechanical hyperinflation therapy.

Respiratory Therapy: Treatments and Techniques

Exercises for Breathing Muscles

In the early stages of Duchenne-type muscular dystrophy, incentive breathing exercises can maintain or improve respiratory muscle strength for an undetermined amount of time.⁹ An incentive spirometer is used for these exercises. The device provides a volume goal for a deep breath and the child is encouraged to hold that volume for 10 to 15 seconds. Fifteen to twenty deep breaths are encouraged four to six times a day.

Aerosol Therapy

Aerosol therapy is a method of delivering medications directly into the lungs, avoiding systemic side effects of oral medications. Specific medications include: mucolytics such as n-acetylcysteine or rhDNase, decongestants such as neosynephrine, antibiotics, and bronchodilators such as albuterol. A small air compressor is attached to a hand-held nebulizer for aerosol generation. The child breathes slowly and deeply through the nebulizer for 15 to 20 minutes 3 to 4 times a day. Another method of delivering medication directly into the lungs is a metered dose inhaler (MDI).

An aerosol treatment program is designed to meet the particular needs of the child during an acute respiratory illness or in a long-term treatment plan. The Pulmonary Medicine team at the MDA Clinic at Arkansas Children's Hospital assists parents in equip-

ment procurement and administration of aerosol therapy.

Chest Physical Therapy

Chest percussion and gravity drainage is a method of chest physical therapy used to loosen and mobilize mucus in the airways. Clapping on the chest over certain areas of the lung will loosen mucus from the airway walls. Inclining the body in certain positions will encourage gravity drainage of mucus. Deep breathing and coughing is required during and after chest physical therapy. This form of therapy can be very effective in removing mucus which has accumulated in the lung during an acute respiratory illness.¹⁰ The Pulmonary Medicine team assists parents in learning this form of respiratory therapy.

Mechanical Ventilatory Aids

The primary focus of respiratory therapy applied to children with Duchenne-type muscular dystrophy is to assist in reducing the rate of decline of the vital capacity. This is accomplished in stages over the progression of the disease with different methods of mechanical ventilatory assistance. Forms of mechanical ventilatory assistance that are available today to children with chronic muscle weakness disorders include:

1. Intermittent positive pressure breathing (IPPB). IPPB is used for 15 to 20 minutes 2 to 4 times a day. This small machine requires a mouthpiece for the connection to the airway. Occasionally a nasal mask or a face mask is used when facial muscles are weak. This machine is very portable. This method of hyperinflation therapy should be introduced early in the course of the disease, when the vital capacity drops below 60% of predicted.

2. A volume ventilator is used at night during sleeping hours. This machine is slightly larger than an IPPB machine and initially requires a nasal or face mask for connection to the airway. The masks are comfortable plastic with head and chin velcro straps to hold it in place during sleep. This method of mechanical assistance is introduced when the child is hypoventilating when asleep, as evidenced by history and physical examination, pulse oximetry study, and capillary blood gas.

3. A volume ventilator can also be used during the day as more assistance is needed during waking hours. A mouthpiece or custom fabricated oral-nasal interface can be used for daytime ventilator use. The machine can easily fit on a ventilator tray on the bottom of a powered wheelchair, allowing full and independent mobility for the user.

When a volume ventilator is used during the day, alternate approaches to airway connection can be considered. Wearing the plastic nasal or face mask during the day may interfere with attending school, social contact with family and friends, and may cause skin irritation due to constant skin pressure. A mouthpiece may not be tolerated due to weakened facial muscles,

air leakage, or dentation. The most commonly considered alternate approach for airway connection is a tracheostomy. This allows the face to be free of incumbrances and permits an easy connection to the ventilator. A tracheostomy does not interfere with speaking when a special valve (Passy-Muir) is in place. Advantages of a tracheostomy include: small airway connection, provides for removal of secretions with a suction device reducing risk for mucus plugging and infection, and allows aerosolized medications to be delivered directly into the lungs.

A tracheostomy requires careful attention to hygiene for infection prevention. Caregivers are instructed in sterile techniques for suctioning. Because the nose is bypassed, most patients require some humidification.

Prevention of Pulmonary Complications

The frequency and severity of atelectasis and pneumonia in children with chronic muscle weakness disorders is directly related to the degree of adherence to an aggressive respiratory care plan. Anticipation and prevention of lung complications through family and patient education can improve the quality of life, promote health, delay the onset of pulmonary dysfunction, and enhance compliance with physician-recommended respiratory care regimens.

The pulmonary medicine team at the MDA Clinic at Arkansas Children's Hospital provides comprehensive pulmonary evaluations for children diagnosed with degenerative muscle disorders. This should be accomplished as soon as possible after the diagnosis has been made. The frequency of subsequent clinic visits is based upon the type of muscle disorder, history, physical examination, rate of decline of the vital capacity, and complexity of their respiratory therapy regimen.

Obesity should be avoided in these children because of the further restriction this condition imposes on ventilation. For the benefit of caregivers and patient, we obtain a formal nutrition consult from a pediatric nutritionist. Immunizations should be up to date and appropriate flu and bacterial vaccinations are encouraged annually.

Excessive muscle fatigue should be avoided, but as much activity as tolerated without pain or fatigue is encouraged. Cough suppressants and sedatives should be avoided because of their interference with mucus clearance. Avoidance of active or passive tobacco smoke or other environmental irritants should be encouraged.

Early attention to upper respiratory infection (URI) should be emphasized to caregivers. Information regarding the signs of URI including nasal stuffiness, nasal drainage, low grade fever, and diminished appetite are outlined in the Respiratory Care Handbook and reviewed at clinic visits. Early treatments for a URI include increased fluid intake, administration of medication for fever control and pseudoephedrine for reduction in nasal symptoms are also outlined in the

handbook.

We educate the family in recognition of symptoms of lower respiratory infection including hoarseness, cough, and high, spiking fevers. Caregivers are encouraged to always seek medical advise from their primary care physician for any respiratory symptoms.

Conclusion

The pulmonary medicine team at the MDA Clinic at Arkansas Children's Hospital is dedicated to providing early assessment and aggressive management for children with degenerative muscle disorders. Careful physical examination, frequent pulmonary function monitoring, reinforcing a healthy lifestyle, and pro-active management of lung and orthopedic complications are keys to providing the longest possible life for these children. Technology aiding in mobility and self-care, and allowing vocational, educational, and recreational pursuits are imperative in providing the best quality of life for a child with Duchenne-type muscular dystrophy.

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Pulmonary Monitoring and Treatment Plan

The forced vital capacity (FVC) will be used to drive this care plan and management will be determined based on changes in FVC. Introduce aerosol and chest physical therapy for acute upper or lower respiratory tract infections as symptoms indicate at any point in the plan.

At the time of MD diagnosis

- *introduce respiratory care handbook
- *Pulmonary Function Testing (PFT) annually
- *watch spinal growth by physical examination

FVC <75% predicted to 61% predicted

- *PFT 4x per year
- *follow any spinal curve by physical/radiological exam
- *instruct in deep breathing with incentive spirometer

FVC<60% predicted

- *PFT 4x per year
- *follow any spinal curve by physical/radiological exam
- *introduce intermittent positive pressure breathing (IPPB) qid
- *evaluate for spinal stabilization surgery

FVC<40% predicted

- *PFT 6x per year
- *follow spinal curve by physical/radiological exam
- *chest x-ray PRN (atelectasis and/or pneumonias)
- *capillary blood gas
- *overnight pulse oximetry study
- *introduce mechanical volume ventilation by mask during sleeping hours as indicated
- *evaluate for spinal stabilization surgery

FVC<30% predicted**

- *PFT 6x per year
- *chest x-ray PRN
- *capillary blood gas
- *overnight pulse oximetry study
- *increase mechanical volume ventilation to include day and night assistance
- *tracheostomy for airway connection may be considered

** lungs at high risk for infection and atelectasis

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Aggressive Mismanagement

J. Kelley Avery, M.D.*

Case Report

A 60-year-old man with known hypertension gave a history of occasional bouts of "pressure" in the chest and shortness of breath associated with mild to moderate exertion for the past two years. These episodes had been worse the past two months. The pain that brought the patient into the hospital was described as mid-sternal, radiating to the shoulders, and associated with some breathlessness and diaphoresis.

In the emergency room, the patient was found to have a blood pressure of 160/90 mm Hg. The chest and heart were normal to auscultation. The EKG showed small Q waves in leads III and AVF with "atypical but nonspecific appearing ST segments." The echocardiogram was reported out as "normal," as was the chest x-ray. Routine laboratory values, including electrolytes and serum glucose, were normal. The patient was admitted as a "rule out myocardial infarction." Admission blood pressure was 150/88 mm Hg. The patient was symptom-free. Both a thallium scan and an exercise tolerance test were ordered.

On the day of admission, while waiting for the treadmill test, the patient complained of chest pain radiating to both arms. The physician was called; he ordered a STAT EKG and nitroglycerin (NTG) sublingually. Before the NTG was given, the blood pressure was 190/112 mm Hg. With almost immediate relief of chest pain the blood pressure was recorded at 170/110 mm Hg.

The physician ordered that the treadmill test be done, and his M.D. associate was to remain with the patient until the test was completed. The EKG showed the Q waves persisting in leads III and AVF, and the T waves inverted in U4-5. As the exercise test proceeded, at 6 MET an atrial bigeminy was observed. The treadmill test was interrupted, and the thallium scan was

begun. Cardiac arrest occurred with documented ventricular fibrillation. Prompt and aggressive CPR was ineffective, and the patient died.

A lawsuit was filed, charging negligence in the failure to diagnose the infarction and in being out of an acceptable standard of care in ordering and proceeding with the treadmill test in the face of evidence strongly suggestive of acute myocardial infarction. No expert witness could be found to support the attending physician's conduct of this case. A six-figure settlement was negotiated.

Loss Prevention Comments

Our attending physician in this case was an experienced specialist in a fine urban medical facility. Could it be that he had become so accustomed to success in the aggressive management of acute myocardial infarction that he had lost the edge of urgency and guarded expectation necessary to make appropriate decisions in the assessment and treatment of this kind of patient?

In retrospect, I am sure that the physician could not believe he had ignored the many signs of instability in this patient! Was he too tired to make a good decision? Was he distracted by a too busy schedule? Was he impaired by chemical dependency? What was it that prevented this physician from the cautious management of his patient, which could have had a positive outcome? Whatever it *really* was will not appear on the chart. It was not to be found in the area of competence, experience, or training.

It is not easy to remain alert and properly focused constantly. It is, in fact, humanly impossible to do so. How can we prevent this type of behavior in ourselves? When we get tired, rest! When we become overly preoccupied, back away - go to a movie, take a walk, or do whatever helps us to refocus with clarity on the patient and his problem. Sometimes it can be a matter of life or death.

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in December 1992. It is reprinted here with permission.



Cardiology Commentary and Update

Laura M. White, Pharm.D.*
Stephanie F. Gardner, Pharm.D.**
J. David Talley, M.D.***

Adverse Drug Reactions

Drug interactions and drug-related adverse reactions are significant problems in healthcare. Reports have shown that drug reactions make up 0.3% to 7% of all hospital admissions, and that 15% of all hospitalized patients have adverse drug reactions during their hospital stays.¹ In addition, a study of 315 elderly patients admitted to an acute care hospital found that 28.2% of admissions were drug related.² Adverse drug reactions were to blame for 16.8% of those admissions.² The Harvard Medical Practice Study II found that drug complications were the most common single type of adverse event. Table I lists the drug classes which were found to be responsible for the adverse events of 30,195 patients in their order of frequency.³ The most common types of adverse events caused by drugs are hematologic, central nervous system, and allergic/cutaneous reactions.

There are many different causes of drug related adverse reactions: drug delivery issues (route and rate of administration, or preparation related), pharmacodynamic drug interactions (indirect, synergistic, antagonist, or additive effects), and pharmacokinetic drug interactions (alterations in absorption, distribution, metabolism, or elimination). In this report, we illustrate examples of these types of drug related problems and the significant effects these reactions have on clinical outcomes.

Adverse Effects Related to Drug Delivery

Drug related adverse effects can be caused by an inappropriate route or rate of drug administration or can be preparation related. The following patient re-

port demonstrates an adverse reaction caused by a drug delivery problem: inappropriate route of administration for intravenous drugs.⁴

Patient Presentation

A 62-year-old female presented to her local emergency room with nausea, diaphoresis, and chest pain. Based on these symptoms and electrocardiographic evidence of S-T segment elevation in the anterior leads, the patient was diagnosed with an acute anterior myocardial infarction. In addition to routine supportive therapy, the patient received tissue plasminogen activator (t-PA, Genentech, Inc., South San Francisco, CA) 15 mg rapid IV push, followed by a 50 mg IV infusion over 30 minutes and a 35 mg IV infusion over 60 minutes through a peripheral IV catheter in the right arm. She was transferred to a tertiary hospital for further evaluation and stabilization.

Upon arrival, the patient became critically hypotensive; and dopamine IV 10 mcg/kg/min was administered through a new IV catheter in her right arm. An intraaortic balloon pump was placed, and the patient was taken to cardiac catheterization lab. A percutaneous transluminal coronary angioplasty (PTCA) was performed successfully on the left anterior descending artery.

On hospital day two, the patient began to complain of pain and swelling in her right arm. Because the right radial artery pulse was not palpable, the orthopedic surgery service was consulted to further evaluate the vascular integrity of the patient's right arm. The Whiteside technique confirmed the diagnosis of compartment syndrome.

Fasciotomies were performed on the upper right extremity, which included a carpal tunnel release. Direct visualization revealed a small localized hematoma at the dopamine injection site, indicating a metabolic response due to dopamine extravasation. This is in contrast to a mechanical cause, such as a large generalized hematoma secondary to a crush injury that can commonly precipitate compartment syndrome. Reperfusion of the right upper extremity was observed by

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Table 1:
Drug Classes Most Frequently Associated with Drug Related Adverse Events

<u>Drug Class</u>	<u>Frequency</u>
Antibiotics	16.2%
Antitumor agents	15.5%
Anticoagulants	11.2%
Cardiovascular agents	8.5%
Anticonvulsants	8.1 %
Diabetic agents	5.5%
Antihypertensives	5.0%
Analgesics	3.5%
Antiasthmatics	2.8%
Sedatives/Hypnotics	2.3%
Antidepressants	0.9%
Antipsychotics	0.7%
Peptic ulcer agents	0.5%
Other	19.3%
Total	100.0%

From: Leape LL, Brennan TA, Laird N, Lawthers AG, Localio R, Barnes BA, et al. The nature of adverse events in hospitalized patients: Results of the Harvard Medical Practice Study II. *N Engl J Med* 1991;324:377-384.

the end of the surgery. The patient remained in critical condition throughout her 20 day hospitalization and was discharged with palpable pulses in the right arm and no nerve damage.⁴

The above patient report illustrates the adverse effect of compartment syndrome, which is the increase in pressure within a closed compartment that compromises blood circulation and may result in tissue necrosis. Thrombolytic therapy has been shown to precipitate such a reaction in the extremities after intraarterial injections, internal bleeding, fractures, burns, and crush injuries. The precipitating factor of compartment syndrome in the illustrated case is believed to be the inappropriate administration of dopamine. Dopamine was infused into a small vein in the same arm where t-PA was given a few hours previously. Dopamine extravasation potentially led to the tissue damage that induced the compartment syndrome.

The adverse reaction of compartment syndrome could have been avoided if dopamine had been administered in a large vein, such as through a central venous line, to minimize the risk of extravasation into the surrounding tissue. Also, the risks of bleeding could have been minimized by establishing vascular access in the contralateral extremity.⁴ This case provides evidence that appropriate administration of medications can reduce hospitalization costs.

Pharmacodynamic Drug Interactions

Adverse events can occur as a result of a drug interaction that alters the pharmacodynamics of a specific drug by the indirect, synergistic, antagonistic, or additive effects of another drug.¹ An example of an additive pharmacodynamic drug interaction is the use of an antihistamine and hypnotic drug, which results in compounded sedative effects.

Pharmacodynamic interactions can occur not only between therapeutic agents, but also with diagnostic agents such as contrast media. An indirect pharmacodynamic interaction is illustrated by the complication of lactic acidosis associated with radiologic contrast media and metformin (Glucophage®, Bristol-Myers Squibb Company, Princeton, NJ), an oral biguanide antihyperglycemic agent used in non-insulin dependent diabetics.⁵

Radiologic contrast dye, frequently used in pyelographic and arteriographic studies, has been demonstrated to induce acute renal failure.⁶ Metformin, in the presence of acute renal failure, can cause lactic acidosis. Therefore, metformin should be discontinued 48 hours prior to and following radiologic studies involving contrast media to minimize the risk of lactic acidosis.⁷

Cases of the metformin-IV contrast dye induced lactic acidosis have been reported in the literature. Assan and colleagues reported six cases of lactic acidosis.⁸ Five of the six metformin patients had IV contrast dye induced acute renal failure which resulted in the development of lactic acidosis.⁸

Bristol-Myers Squibb Company, manufacturer of the drug Glucophage®, has included a black box warning in the package insert concerning lactic acidosis and has contraindicated its use when patients undergo radiologic studies involving IV contrast media.⁵ Although this example of a drug/contrast media interaction is rare, pharmacodynamic drug interactions can result in life-threatening consequences.

Pharmacokinetic Drug Interactions

A third type of adverse drug reactions can occur as a result of pharmacokinetic drug interactions. These interactions are caused by alterations in absorption, distribution, metabolism, or elimination of a drug after the administration of another drug. A common cause of pharmacokinetic drug interactions is the inhibition or induction of the cytochrome P450 enzymes. These enzymes, found in the liver and small intestines, are involved in human drug metabolism.⁹ Pharmacokinetic drug interactions typically result in changes in drug concentrations in the body, and usually lead to an altered biological response.¹

One example of a significant pharmacokinetic drug interaction is the concomitant administration of digoxin and amiodarone. This common drug interaction has

been classified as clinically significant, because the combination results in dramatic elevations of serum digoxin levels. Case reports of levels increasing 69% to 800% have been published, but most studies indicate a 50% increase in serum digoxin levels. In addition, this drug interaction may take several days to develop and serum digoxin levels may continue to rise over a period of weeks to months. Although the exact mechanism of the pharmacokinetic drug interaction between amiodarone and digoxin is not fully established, studies indicate that amiodarone inhibits the renal and/or nonrenal clearance of digoxin. Amiodarone may also decrease tissue binding sites and increase the oral bioavailability of digoxin.

Because of the significant toxicities associated with rising serum digoxin levels, an empiric 50% reduction of the digoxin dose is advised if both drugs are used. In addition to serum digoxin levels, signs and symptoms of digoxin toxicity should be closely monitored.⁷ Pharmacokinetic drug interactions, such as the example given, can result in detrimental, and even lethal outcomes.

Conclusions

Drug-related adverse reactions and interactions can have significant effects on patient outcomes and hospitalization costs. Yet, there are many ways to avert such negative consequences. Avoiding the examples given, assessing high risk patients (patients with renal or hepatic impairment, elderly patients, and patients taking multiple medications), and encouraging

the use of the same physician and pharmacy will help to decrease the incidence of preventable adverse patient outcomes.

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Reportable Disease Update

To simplify communicable disease reporting and to conform with recommendations of the Centers for Disease Control and Prevention, the following changes have been made to the list of reportable diseases in the Rules and Regulations Pertaining to Communicable Disease Control.

Thirteen diseases that seldom occur in Arkansas have been removed from the reportable disease list. These diseases are Amoebiasis, Coccidioidomycosis, Guillain-Barre Syndrome, Leptospirosis, Q Fever, Relapsing Fever, Reye Syndrome, Smallpox, Thrichinosis, Typhus Fever, Granuloma Inguinale, Lymphogranuloma Venereum and Gonococcal Ophthalmia.

The category of diseases that required reporting only when outbreaks occur has been deleted and the following statement substituted: "Report any unusual disease or disease outbreaks that may require public

health assistance."

When reporting Syphilis, if the patient is pregnant, please indicate the trimester of pregnancy.

Any HIV-infected woman who is pregnant must be reported as soon as pregnancy is confirmed. A report must be made each time the woman is pregnant. Pregnancy must be reported even if the person has been previously reported as HIV-infected. Trimester of pregnancy at time of reporting should also be given.

Congenital syphilis is to be reported separately from other syphilis patients.

Anyone with questions or wanting copies of the reportable disease list may call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893 or (800) 482-5400 during normal business hours. For assistance after hours or during weekends or holidays, please call (800) 554-5738.

Effects of Exposure to Toxic Substances Educational Video Available

The Arkansas Department of Health, through funding from the Agency for Toxic Substances and Disease Registry (ATSDR), has developed an educational program for physicians, residents and/or nurses titled, "Effects of Exposure to Toxic Substances." This program was developed to inform physicians and other health care providers about the National Priorities List (NPL) sites, also known as Superfund sites, in Arkansas. At this time, Arkansas has 12 Superfund sites in various locations around the state. The presentation also provides information on the chemicals located on those sites and their properties, routes of exposure,

diagnostic tests, and health effects.

The program was developed in two formats, video tape and slide/audio. Both formats of the program are available for viewing either from your local AHEC library or from the Arkansas Department of Health's Resource Library. To check out the program from ADH, please call our Resource Library at (501) 661-2572 or call (501) 661-2604.

We hope that you will take advantage of the opportunity to access this resource which was developed to assist physicians in learning more about one of the environmental issues which is relevant to Arkansans.

Reported Cases of Selected Diseases in Arkansas

Profile for September 1996

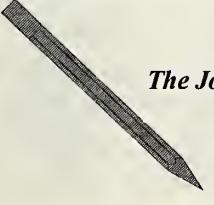
The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Sept. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases 1995	Total Reported Cases YTD 1994	Total Reported Cases 1994
Campylobacteriosis	29	193	116	153	140	187
Giardiasis	20	119	93	131	82	126
Shigellosis	18	105	93	176	139	193
Salmonellosis	78	361	248	332	432	534
Hepatitis A	31	376	476	663	190	253
Hepatitis B	5	62	62	83	41	60
HIB	0	0	5	6	3	5
Meningococcal Infections	2	27	27	39	41	55
Viral Meningitis	3	28	30	31	57	62
Lyme Disease	0	21	9	11	15	15
Rocky Mountain Spotted Fever	2	18	31	31	18	18
Tularemia	2	18	20	22	20	23
Measles	0	0	2	2	1	5
Mumps	0	1	6	5	5	7
Gonorrhea	***	***	***	5437	***	7078
Syphilis	***	***	***	1017	***	1096
Legionellosis	0	1	6	5	10	16
Pertussis	2	8	57	59	32	33
Tuberculosis	16	142	159	271	197	264

*** Not available at time of printing.

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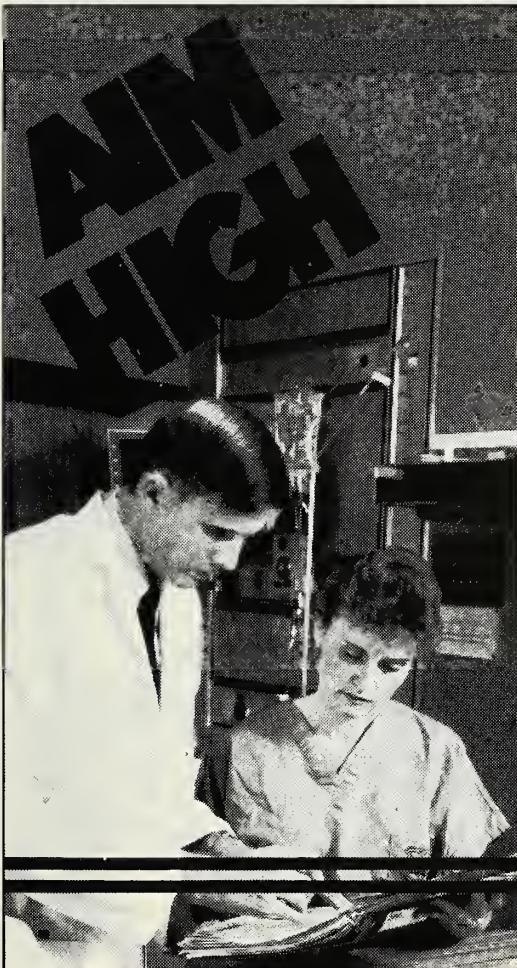
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In Memoriam

Guy R. Farris, M.D.

Dr. Guy R. Farris, of Little Rock, died Sunday, October 27, 1996. He was 76. His family includes his wife, Joan; a brother, William J. "Bill" Farris of Enola; two sons, Guy Raymond Farris III of Tucson, Arizona, and Richard E. Farris of Little Rock; two daughters, Ruth Ann Yancey of Colorado Springs, Colorado, and Kristi Broglen of Little Rock; 11 grandchildren; and three great-grandchildren.

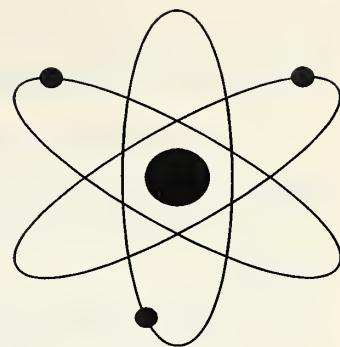


Radiological Case of the Month

Steven R. Nokes, M.D., Editor

Authors

Steven R. Nokes, M.D.
Charles P. Fitzgerald, M.D.
C.D. Williams, M.D.



History:

A 58-year-old man presented with dyspnea. The patient had undergone triple coronary artery bypass grafting several years earlier. A chest film (figure 1), echocardiogram, and CT scan of the chest (figures 2 a-c), were performed.



Figure 1

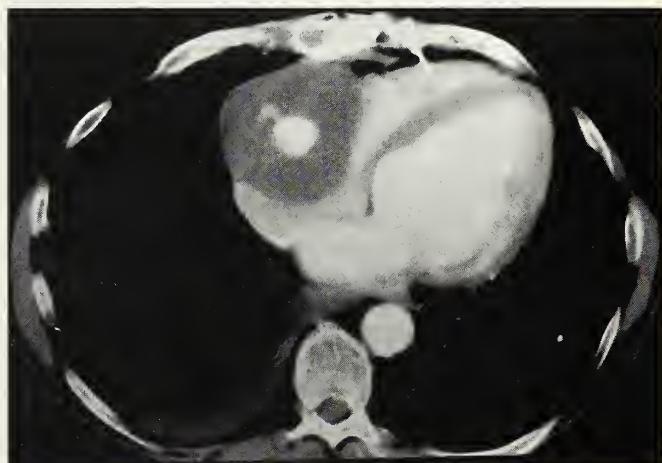


Figure 2a

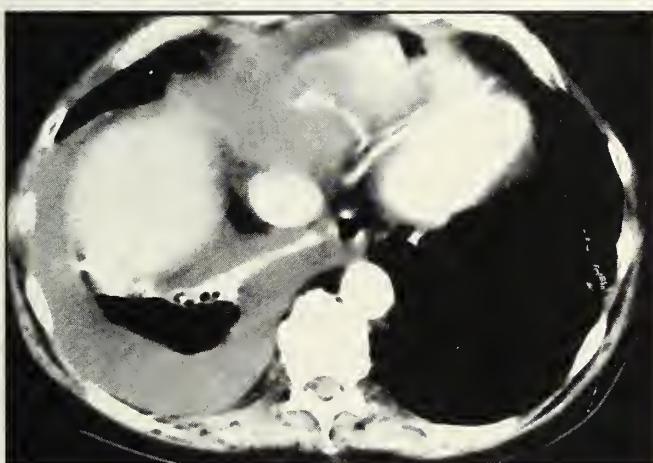


Figure 2b



Figure 2c

Figure 1: PA Chest x-ray.

Figure 2: CT scans of the chest at the level of the heart (a, b) and sagittal reconstruction (c).

Right Coronary Artery Bypass Graft Aneurysm

Diagnosis: Right coronary artery bypass graft aneurysm.

Findings:

The chest film reveals a subtle extra density adjacent to the right heart border. The CT scan demonstrates a 7 cm mass indenting the right atrium with central contrast enhancement and peripheral decreased attenuation. The sagittal reconstruction identified a contrast connection from the right coronary graft to the center of the mass. A small right pleural effusion is present.

Discussion:

Aneurysms of aortocoronary saphenous vein bypass grafts are rare, and can occur as early or late complications. Most occur at an anastomotic site. The mechanism by which these aneurysms develop is unclear and probably multifactorial. Complications include distal thromboembolism, myocardial infarction and rupture.

Previously the diagnosis rested on coronary angiography. With the advent of faster CT scanners (helical and electron beam) images can be obtained during the arterial phase when the lumen is identifiable. Angiography remains necessary for preoperative planning. Scans obtained with older scanners typically revealed an anterior mediastinal mass suggesting teratoma, thymoma, lymphoma, or a pericardial cyst.

References:

1. Forster DA, Haupert MS. Large mediastinal mass secondary to an aortocoronary saphenous vein bypass graft aneurysm. Ann Thorac Surg 1991; 52:547-8.
 2. Yousen D, Scott W, Fishman EK, Watson AJ, Traill T, Gimenez L. Saphenous vein graft aneurysms demonstrated by computed tomography. J Comput Assist Tomogr 1986; 10:526-8.
 3. Vijayanager R, Shafii E, DeSantis M, Waters RS, Desai A. Surgical treatment of coronary aneurysms with and without rupture. J Thorac Cardiovasc Surg 1994; 107:1532-5.
-

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Author: C. D. Williams is associated with Arkansas Cardiovascular Surgery Associates, P.A. in Little Rock.

Things To Come

January 17-19, 1997

Essentials of Prostate & Genitourinary Imaging. Marriott's Orlando World Center Resort, Orlando, Florida. Jointly sponsored by the Foundation for Health Education and Medical Education Collaborative. For more information, call (908) 636-1256 or 1-800-599-8878.

February 8-10, 1997

12th Annual Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Center for Continuing Medical Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 9-14, 1997

Advances in Imaging: 1997. Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Tulane University Medical Center and Louisiana State University School of Medicine. For more information, call (504) 588-5466 or 1-800-588-5300.

February 20-23, 1997

Current Issues in Gynecologic Endoscopy. The Resort at Squaw Creek, Squaw Valley, California. Sponsored by the American Association of Gynecologic Laparoscopists. For more information, call (310) 946-8774 or 1-800-554-2245.

February 26-28, 1997

The Third National Primary Care Conference: Community-Based Academic Partnerships. Washington Sheraton Hotel, Washington, DC. Sponsored by Health Resources & Services Administration, U.S. Department of Health & Human Services. For more information, call (301) 986-4870.

March 7-9, 1997

Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Crowne Plaza Manhattan, New York City. Sponsored by the Center for Bio-Medical Communication, Inc., in collaboration with the American Foundation for AIDS Research. For more information, call (201) 385-8080.

March 21-25, 1997

North American Skull Base Society 8th Annual Meeting Combined with 2nd International Congress on the Cerebral Venous System 2nd International Congress on Meningiomas. The Excelsior Hotel, Little Rock, Arkansas. For more information, call (301) 654-6802.

April 4-5, 1997

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 10-12, 1997

Refresher Course & Update in General Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 25-27, 1997

1997 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Co-sponsored by the Alton Ochsner Medical Foundation and Tulane University School of Medicine. For more information, call (504) 842-3702 or 1-800-778-9353.

September 5-7, 1997

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20, 1997

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07

Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom

Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center

Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

*Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center***JONESBORO-AHEC NORTHEAST**

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club

Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.

Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.

Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Cardiology Conference, dates vary, 7:00 p.m., locations vary

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center

Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.

Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

1996

Arkansas

Medical Society

Membership Roster

as of November 12, 1996



Arkansas Medical Society Membership Roster

as of November 12, 1996

Denotes deceased member

Arkansas County

Burleson, Stan W.
Chavin, Michael A.
Daniel, Noble B. III
Hestir, John M.
Millar, Paul H. Jr.
Morgan, Jerry D.
Northcutt, Carl E.
Pritchard, Jack L.
Speer, Hoy B. Jr.
Speer, Marolyn N.
Tracy, W. Lee
Yelvington, Dennis B.

Ashley County

Burt, Frederick N.
Garcia, Luis F.
Gresham, Edward A.
Heder, Guy W.
Henry, William Jr.
McGowan, Patrick F.
Rankin, James D.
Salb, Robert L.
Spohn, Peter J.
Thompson, Barry V.
Toon, D. L.
Walsh, Benjamin J.

Baxter County

Adkins, Kevin J.
Baker, Robert L.
Barker, Monty
Barnes, Gregory
Beck, Dennis
Chatman, Ira D.
Cheney, Maxwell G.
Chock, Daniel P.
Chock, Helga E.
Clarke, James S.
Condrey, Yoland M.
DeYoung, Bruce
Douglas, Donald S.
Dyer, William
Dykstra, Peter C.
Elders, John Gregory
Foster, Robert D.
Guenther, John F. #
Hagaman, Michael S.

Hardin, Philip R.
Johnson, Stacey M.
Kelley, Lawrence A.
Kerr, Robert L.
Kilgore, Kenneth M.
Knox, Thomas E.
Landrum, William
MacKercher, Peter A.
Massey, James Y.
McAlister, Matthew
McBride, Anthony D.
Neis, Paul R.
Price, Michael D.
Pritchard, Jamie
Regnier, George G.
Rigler, Wilson F.
Robbins, Bruce
Roberts, David H.
Saltzman, Ben N.
Short, Luke H.
Simons, Roger D.
Sneed, John W. Jr.
Stahl, Ray E. Jr.
Sward, David T.
TerKeurst, John
Trager, Marc
Tullis, Joe M.
Turner, Frederick C.
Wells, Gary
White, Edward
White, Richard B.
Wilbur, Paul F.
Wilson, Jack C.
Yoder, Robert Raymond

Benton County

Addington, Alfred R.
Alderson, Roger
Allen, L. Barry
Allen, William M.
Arkins, James
Atkinson, Thomas
Ball, Eugene H.
Becton, Paul Jr.
Benjamin, George
Benson, Stuart
Black, Randall Wayne
Bledsoe, James H.

Boden, Donna
Boozman, Fay W. III
Cantwell, Janet
Clemens, R. Dale
Clower, John D.
Cohagan, Donald L.
Cole, Randall E.
Compton, Neil E.
Costaldi, Mario E.
Cuchia, John
Dang, Minh-Tam
Day, Geoffrey
Deatherage, Joseph R.
Denman, David A.
Diacon, W. Lindley
Donnell, Hugh Garland
Donnell, Robert W.
Elkins, James P.
Ewart, David
Fioravanti, Bernard L.
Friesen, Douglas L.
Garrett, David C. III
Goss, Stephen
Halinski, David
Harmon, Harry M.
Heiss, Nancy
Henderson, Oscar L.
Hitt, Jerry L.
Hof, C. William
Holder, Robert E.
Horner, Glennon A.
Howard, K. Lamar
Hull, Robert R.
Huskins, James D.
Huskins, John A.
Jacks, John W.
Jennings, William E.
Johnson, Christopher S.
Johnson, Royce Oliver II
Johnson, Steven P.
Keane, Patrick K.
Knapp, James R.
Lanier, Karen A.
Lewis, Rebecca C.
Marciniak, Douglas L.
McCollum, Edward
McCollum, William
McKnight, William D.

Mertz, John Douglas
Mishkin, David
Moose, John I.
Mullins, Neil D.
Neaville, Gary A.
Nugent, Loyd
Panettiere, Frank J.
Pappas, John J.
Pearson, Richard N.
Pickens, James L.
Platt, Michael R.
Poemoceah, Kenneth M.
Puckett, Billy J.
Reese, Michael C.
Revard, Ronald
Ritz, Ralph C.
Rollow, John A.
Rolniak, Wallace A.
Springer, Dan J.
Steadman, Hunter M. Jr.
Stinnett, Charles H.
Stinnett, Scott G.
Stolzy, Sandra
Summerlin, William
Swaim, Terry J.
Swindell, William G.
Tate, Jeffrey
Treptow, Douglas
Turley, Jan T.
Warren, Grier D.
Weaver, Robert H.
Webb, William
Wright, Larry D.
Youngblood, Thomas

Boone County

Abdelaal, Ali F.
Ashe, Barbara
Baumwell, Sterling H.
Bell, Thomas Edward
Bennett, Chris
Bennett, Joe D.
Brand, Robert
Brandon, Henry
Casey, Rick E.
Chambers, Carlton L. III
Chambers, Sue
Chu, Victor

Collins, Kenneth
Crider, James T.
Daniel, Charles D.
Dunaway, Geoffrey
Ferguson, Noel F.
Flanigan, Stevenson
Fowler, Ross E.
Helmling, Robert L.
Hope, John M.
Kim, Hyewon
Klepper, Charles R.
Langston, James David
Langston, Robert H.
Langston, Thomas
Ledbetter, Charles A.
Leslie, Sharron J.
Leslie, Thomas S.
Maes, Stephen R.
Mahoney, Paul L. Jr.
Maris, Mahlon O.
Mears, Bill
Miller, Robert Jr.
Morris, Robert II
Padilla, Jose S. Jr.
Reese, Ronald R.
Rozeboom, Victor A.
Scroggie, Daniel J.
Scroggins, Sam J.
Shapter, Janet B.
Van Ore, Stevan Michael
Vowell, Don R.
Welch, William P.
Williams, Rhys A.

Bradley County

Chambers, F. David
Coyle, Pamela
Fort, David Jr.
Foscue, David
Marsh, James W.
Pennington, Kerry F.
Wharton, Joe H.
Wynne, George F.

Carroll County

Card, Shannon R.
Flake, William K.
Horton, Charles
Kresse, Gregory
Martinson, Alice
McAlister, Robin
Nash, John R.
Spann, Eric G.

Spurgin, Randal Truman
Stensby, Harold F.
Taylor, Richard L.
Wallace, Oliver
Warner, Milo N.

Chicot County

Burge, John P.
Kronfol, Ned
Mansour, George
Russell, John R.
Smith, Major E.
Thomas, H. W.
Tuangsithanon, T.
Tvedten, Tom
Weaver, William J.
Wilson, Thomas C.

Clark County

Anderson, P. R.
Balay, John W.
Bryan, Yvon F.
Dorman, Robert A.
Elkins, John S.
Ferrari, Victor J. Jr.
Ford, Michael Ray
Fullerton, John C. III
Hagood, Noland Jr.
Jansen, Mark
Kluck, Carl Jr.
Lowry, James L.
McLeod, Kevin
Peeples, George R.
Taylor, George D.
Teed, Frank S.

Cleburne County

Baldridge, Max
Barnett, James C. #
Barnett, Michael
Beasley, Harold
Bivins, Franklin Jr.
Quinn, Cynthia D.
Sharp, Jan
Thomas, Jerry L.
Vaughan, G. Lee

Columbia County

Alexander, John E. Sr.
Alexander, John E. Jr.
Baldwin, Ronald L.
Evans, Matthew L.

Farmer, John M.
Griffin, Rodney L.
Hester, Joe D.
Hunter, Robert W. Jr.
Kelley, Charles W.
McMahan, H. Scott
Murphy, Fred Y.
Parkman, Robert L. Jr.
Pullig, Thomas A.
Roberts, Franklin D.
Ruff, John L.
Strange, Vance M. #
Walker, Jack T.
Wynn, Chester

Conway County

Duensing, Theodore
Hickey, Thomas H.
Lipsmeyer, Keith M.
Owens, Gastor B.
Wells, Charles F.

Craighead-Poinsett County

Allen, John M.
Alston, Herman D.
Ameika, James A.
Aston, J. Kenneth
Awar, Ziad
Ball, John
Barker, Charles
Basinger, James W.
Beck, M. Lowery
Berry, Donald M.
Berry, Michael P.
Blachly, Ronald J.
Blaylock, Jerry D.
Bolt, Michael E.
Boyd, John T.
Braden, Terence P. III
Brown, Dennis R.
Brown, Mark C.
Burns, Richard G.
Burns, Robert
Bush, Anne E.
Camp, Michael
Carpenter, Kennan
Casanova, Robert Jr.
Chan, Kenneth
Chediak, Gregory
Clopton, Owen H. Jr.
Cohen, Evan Scott
Cohen, Jeffrey O.

Cohen, Robert S.
Collins, Kevin Basil
Cook, John
Cranfill, Ben
Cranfill, General L. III
Crawley, Michael E.
Deem, Brent S.
Degges, Russell D.
Dickson, Glenn E.
Dow, J. Timothy
Duke, Billy L. II
Dunn, Charles C.
Eddington, William R.
Edwards, Carl B.

Emerson, Steven
Felts, Larry S.
Fields, L. Brad
Foote, John W.
Forestiere, A. J.
Garner, B. Matt
Garner, William L.
George, F. Joseph
Golden, Stephen C.
Gossett, Clarence E.
Goza, Gary R.
Green, Terri

Green, William Robert
Guinn, Donald R.
Hackbarth, Mark A.
Hall, Ray H. Jr.
Harvey, Bryan
Hiers, Connie L.
Hightower, Michael D.
Hill, Roger D.
Hogue, Ernest L.
Hoke, W. Scott
Houchin, Vonda
Hubbard, William S.
Hurst, William
Isaacson, Michael L.
James, Frank M.
Jennings, R. Duke
Jiu, John B.
Johnson, John A.
Johnson, Larry H.
Johnson, Roehl W.
Jones, K. Bruce
Jones, R. J.
Keisker, Henry W.
Kemp, Charles E.
Kostick, Richard A.
Kroe, Donald J.
Kyle, Richard

Labor, Penny M.	Skaug, Phyllis	Doyle, Edward	Wright, William J.
Labor, Phillips K.	Skaug, Warren A.	Edds, Millard C.	
Landry, Robert J.	Smith, Floyd A. Jr.	Edwards, Henry N.	Cross County
Lawrence, Robert O. Jr.	Smith, Michael J.	Flanagan, Mary Clare	Beaton, J. Trent
Ledbetter, Joseph W.	Smith, Vestal B.	Floyd, Rebecca R.	Beaton, Kenneth E.
Lepore, Diane G.	Sneed, Jane	Hazar, Derya B.	Bethell, Robert D.
Levinson, Mark	Snodgrass, Scot J.	Heaver, Holly M.	Burks, Willard G.
Lewis, David M.	Sparks, Barrett	Hefner, David P.	Crain, Vance J.
Lunde, Stephen P.	Spencer, John P.	Jennings, Charles A.	Hayes, Robert A. Jr.
Luter, Dennis W.	St Clair, John T. Jr.	Katz, Catherine	Jacobs, James R.
Lynch, John	Stainton, Joseph C.	Mason, Joe N.	
Mackey, Michael	Stainton, Robert M. Jr.	Ross, R. Wendell	Dallas County
Maglothin, Douglas L.	Stallings, Joe H. Jr.	Sasser, L. Gordon III	Delamore, John H.
Mahon, Larry E.	Stank, Thomas M.	Schlabach, Ronald D.	Howard, Don
Marzewski, David	Stevenson, Richard	Sills, D. Bart	Nutt, Hugh A.
McDaniel, Craig A.	Stidman, Jeff	Travis, A. Lawrence	Spears, Robert S.
McKee, Sanders	Stripling, Mark C.		Suphan, Neema A.
Modelevsky, Aaron C.	Stroope, Henry F.		
Montgomery, Earl W.	Stubblefield, Sandra		Desha County
Moseley, Claiborne II	Stubblefield, William		Asemota, Steve
Murrey, James F.	Swingle, Charles G.		Go, Peter Kong Hua
Nash, Jerry	Tagupa, Eumar		Harris, Howard R.
Nixon, D. Allen Jr.	Taylor, Robert D.		Masquil, Filipe
Owen, Kip	Tedder, Barry C.		Prosser, Robert L. III
Owens, Ben Jr.	Tedder, Michael E.		Scott, Robert B.
Parten, Dennis	Templeton, Gary L.		Turney, Lonnie R.
Patel, Dharmendra V.	Thomas, Gary A.		Young, James E.
Peacock, Loverd	Tidwell, Kenneth Jr.		
Porter, Revel D.	Tonymon, Kenneth		Drew County
Price, Edwin F.	Tuck, Rebecca		Burns, Robert E.
Price, Herbert H. III	Verser, Michael		Busby, Arlee K.
Pryor, Shapard Jr.	Vines, Troy Alan		Gordon, Leonard F.
Pyle, David	Vollman, Don B. Jr.		Maxwell, Ralph M.
Ragland, Darrell G.	Walker, Meredith M.		McKiever, William R.
Rainwater, W. T.	Warner, Robert L. Jr.		Wallick, Paul A.
Rauls, Stephen R.	White, Anthony T.		Williams, William III
Ricca, Dallie	Wiggins, H. Lynn		Wilson, Harold F.
Ricca, Gregory F.	Williams, Anthony		
Richards, Fraser M.	Williams, E. Walden		Faulkner County
Roberts, Randy D.	Wilson, Joe T. Jr.		Arnold, Robert S.
Rogers, James F.	Wisdom, Garland Durwood		Beasley, Margaret D.
Rusher, Albert H. Jr.	Woloszyn, John		Bell, F. Keith
Sales, Joseph Hugh	Wood, Mark Cole		Benafield, Robert B.
Sanders, James W.	Woodruff, Stephen O.		Bowlin, Randal
Sapiro, Gary S.	Woodward, Gary W.		Bowman, Gary
Sauer, Curtis	Yates, Robert L.		Carter, D. Mike
Savage, Patrick Joseph	Young, William C. Jr.		Clark, Robert L. Jr.
Schrantz, James L.			Collins, Mitchell L.
Scriber, Ladd J.			Connaughton, Michael A.
Scroggin, Carroll D. Jr.			Cummins, J. Craig
Shanlever, William T.			Daniel, Sam V.
Sifford, Mark			Dixon, Jerry W.
Silas, David			

Dodge, Ben	Bracken, Ronald J.	Jackson, Haynes G. Jr.	Shelby, Eugene M.
Furlow, William C.	Braley, Richard E.	Jackson, Michael S.	Shroff, Rajesh K.
Garrison, James S.	Braun, James R.	James, Janeen	Simpson, John B.
Ghormley, J. Tod	Brunner, John H.	Jayaraman, K. K.	Slaton, G. Don
Gordy, L. Fred Jr.	Burton, Frank M.	Jayaraman, Vilasini D.	Sloand, Timothy Peter
Gray, George T. III	Burton, James F.	Jayasundera, Naomal S.	Smith, Bruce L. Jr.
Hendrickson, Richard O. Jr.	Campbell, James W.	Johnson, Robert D.	Smith, John W.
Hudson, Thomas F. III	Cates, Jack A.	Johnston, Gaither C.	Smith, Phillip L.
Huggins, David P.	Cenac, Joseph W. Jr.	Josef, Stanley	Sorrels, John W.
Jackson, Carole	Cunningham, Mark	Kaler, Ron A.	Sousan, Leo
Landberg, Karl H.	Cupp, Cecil W. III	Keadle, William R.	Springer, Melvin R. Jr.
Lewis, Gregory	Cyrus, Scott S.	Kincheloe, A. Dale	Springer, William Y.
Magie, Jimmie J.	Daniel, Robert G.	Kleinhenz, Robert W.	Stecker, Elton H. Jr.
Martin, David A.	Davis, Kristie L.	Klugh, Walter G. Jr.	Stecker, Rheeta M.
McCarron, Robert	Davis, Sheryl L.	Koehn, Martin A.	Stough, D. Bluford III
McChristian, Paul L.	Dodson, John W. Jr.	Lane, Charles S. III	Stough, Dow B. IV
Murphy, Kenneth	Dolan, Patrick III	Larey, Mark E.	Tangunan, Priscilla L.
Raney, Herschel D. Jr.	Dunn, Richard W.	Larrison, Charles A.	Tapley, David R.
Roberts, Thomas	Dykman, Kathryn	LeMay, Thomas B.	Thomas, W. Al
Ross, Rex W.	Eisele, W. Martin	Lee, Allen R.	Thompson, Thomas P. Jr.
Shaw, Collie B.	English, P. Timothy	Lee, William R.	Trieschmann, John W.
Shirley, David C.	Finch, Richard R.	Lennon, Yates	Tucker, R. Paul
Smith, John D.	Fine, B.D. Jr.	Lyles, Fred	Vallery, Samuel W.
Smith, Lander A.	Fore, Robert W.	Martin, Jana	Wallace, Thomas
St. Amour, Scott C.	Fotioo, George J.	Maruthur, Gopakumar	Walley, Luther R.
Stancil, Vicki	French, James H.	Mashburn, William R.	Warren, E. Taliaferro
Stone, Phillip	Gammill, Todd	Mathews, John S.	Warren, William Jr.
Throneberry, Bart	Gardial, J. Richard	McCrary, Robert F. Jr.	Watermann, Eugene
Wright, Gary David	Gardner, James L.	McFarland, Louis R.	Webb, Timothy
	Gerber, Allen D.	McMahan, James	Weyrich, Randall P.
	Gocio, Allan C.	Meek, Gary N.	Woodward, Philip A.
	Griffin, James E.	Munos, Louis R.	Wright, Charles C.
	Haggard, John L.	Olive, Robert Jr.	Young, Michael J.
	Hale, Kevin D.	Pai, Balakrishna	
	Harper, Edwin L.	Pappas, Deno P.	
	Headrick, Daniel	Parkerson, Cecil W.	
	Hechanova, D. M. Jr.	Peeples, Raymond E.	
	Heinemann, Fred M.	Pellegrino, Richard	
	Heinemann, Phyllis E.	Plaza, Jesus' A.	
	Henderson, Francis M.	Powell, Brenda	
	Henson, Clinton H.	Puen, Roy L.	
	Hickman, Michael P.	Queen, George P.	
	Hill, Robert L.	Rainwater, W. Sloan	
	Hitt, W. C. Jr.	Rayburn, John	
	Hollis, Thomas H.	Reddy, Prabhakara K.	
	Howe, H. Joe	Robbins, Mark	
	Hughes, James A.	Robert, Jon M.	
	Hulsey, Matthew	Roda, Ferdinand T.	
	Humphreys, Robert P.	Rosenzweig, Joseph L.	
	Hunter, Karla	Russell, Mark	
	Irwin, William G.	Sanders, Hallman E.	
	Jackson, Brian D.	Seifert, Kenneth A.	
	Jackson, Haynes G.	Sharma, Bimlendra	

Franklin County

Brooks, Homer E.
Gibbons, David L.
Lachowsky, John
Long, C. C.
Smith, John C.
Wilson, Robert
Zabad, Hussein

Garland County

Arthur, James M.
Aspell, Robert
Atherton, Lee G.
Bandy, Preston R.
Bennett, Keith
Bodemann, Diane
Bodemann, Donald R.
Bodemann, Michael C.
Bodemann, Stephen L.
Bohnen, Loren O.
Boos, Donald Jr.
Borg, Robert V.
Borland, Judy

Shelby, Eugene M.
Shroff, Rajesh K.
Simpson, John B.
Slaton, G. Don
Sloand, Timothy Peter
Smith, Bruce L. Jr.
Smith, John W.
Smith, Phillip L.
Sorrels, John W.
Sousan, Leo
Springer, Melvin R. Jr.
Springer, William Y.
Stecker, Elton H. Jr.
Stecker, Rheeta M.
Stough, D. Bluford III
Stough, Dow B. IV
Tangunan, Priscilla L.
Tapley, David R.
Thomas, W. Al
Thompson, Thomas P. Jr.
Trieschmann, John W.
Tucker, R. Paul
Vallery, Samuel W.
Wallace, Thomas
Walley, Luther R.
Warren, E. Taliaferro
Warren, William Jr.
Watermann, Eugene
Webb, Timothy
Weyrich, Randall P.
Woodward, Philip A.
Wright, Charles C.
Young, Michael J.

Grant County

Covington, Brenda K.
Irvin, Jack M.
Paulk, Clyde D.
Winston, Scott D.

Greene-Clay County

Baker, Clark M.
Boggs, Dwight F.
Bonner, J. Darrell
Cagle, Roger E.
Collier, George H. Jr. #
Collier, Jon D.
Crow, Asa A.
Duckworth, Hillard R.
Fonticiella, Adalberto
Fonticiella, Aldo V.
Hardcastle, R. Lowell
Hazzard, Marion P.

Hobby, George A.
Jackson, Ron
Kemp, Clarence
Lawson, J. Larry
Martin, Richard O.
Mitchell, Bennie E.
Morrison, Jimmy J.
Muse, Jerry L.
Page, Billie C.
Perry, Evelyn S.
Perry, John K.
Purcell, Donald I.
Rollins, William
Sellars, John R.
Shedd, Leonus L.
Sheridan, James G.
Shotts, C. Mack Jr.
Shotts, Vern Ann
Smith, Norman E.
Watson, Samuel D.
White, Robert B.
Williams, Dwight M.
Williams, Jacob M.

Hempstead County

Finley, George
Harris, Lowell O.
Holt, Forney G.
Johnson, David L.
McKenzie, Jim
Portis, Richard P.
Stevens, David G.
Wright, George H.

Hot Spring County

Berry, Frederick B.
Bollen, A. Ray
Brashears, Larry B.
Burton, Bruce K.
Cobb, Russell W.
Ellis, C. Randolph
Highsmith, Vivian F.
Kersh, N. B.
Lumb, John C.
Peters, Claude F.
Tilley, Absalom
Vaughan, John A.
White, Bruce A.
White, Robert H.

Howard-Pike County
Dunn, Robert
Floyd, Mark A.
Gullett, A. Dale
Humphreys, T. J. Jr.
King, Joe D.
Martinazzo-Dunn, Anna
Peebles, Samuel W.
Sayre, John
Sykes, Robert
Turbeville, James O.
Ward, Hiram T.
White, Phillip L.

Independence County
Alexander, William Steve
Allen, James D.
Angel, Jeff D.
Baker, John R.
Baker, Robert V.
Bates, Ronald J.
Beck, James F.
Bess, Lloyd G.
Brown, Hunter Lee
Brown, Verona T.
Cummins, Thomas
Davidson, Andy
Davidson, Dennis O.
Fowler, William
Goodin, William H. Jr.
Hays, Sarah F.
Jeffrey, Jay R.
Johnson, Deborah A.
Jones, Edward J.
Jones, Edward T.
Joseph, Aubrey S.
Kearns, Harry
Ketz, Wesley J.
Lambert, John S.
Lytle, Jim E.
McClain, Charles M. Jr.
Melton, Clinton G.
Moody, Lackey G.
Neaville, Gregory
O'Brien, Marcus D.
Piediscalzi, Nicholas
Scott, John G.
Simpson, Ronald
Slaughter, Bob L.
Sloan, Fredric J. II

Stalker, James M.
Sutterfield, Terry F.
Taylor, Chaney W.
Taylor, Charles A.
Van Grouw, Richard
Waldrup, William J. III
Walton, Robert B.
Webster, Russell P.
Williams, Robin C.

Jackson County
Ashley, John D. Jr.
Carney, J. W. #
Chauhan, Mufiz A.
Dudley, Guilford M. III
Falwell, K. Wade
Frankum, Jerry M. Jr.
Fremming, Bret G.
Green, Roger L.
Hergenroeder, Paul J.
Hunt, Randall Evan
Jackson, Jabez Fenton Jr.
Junkin, A. Bruce
Molnar, Istvan
Montgomery, F. Renee'
Poon, Hon K.
Reynolds, Roland C.
Snodgrass, Phillip A.
Young, Jack S. III
Ziebold, Christine S.

Jefferson County
Alexander, Lester T.
Ancalmo, Nelson
Anderson, Charles W.
Armstrong, Simmie Jr.
Atiq, Omar T.
Atkinson, Robbie
Atnip, Gwyn
Attwood, H.
Baho, Haysam
Bell, Carl H. Jr.
Bitzer, Lon
Blackwell, Banks
Bracy, Calvin M.
Brooks, R. Teryl Jr.
Broughton, Stephen A.
Bruton, J. Lewis
Buckley, J. Wayne
Busby, John
Butler, Robert C.
Campbell, James C. Jr.
Carlton, Irvin L.

Cash, J. Steven
Cheek, Ben H.
Clark, Charles A.
Cook, Jonathan M.
Courtney, Willis Jr.
Crenshaw, John
Davis, Charles M.
Davis, Paul W.
Dedman, John D.
Del Giudice, Jose A.
Deneke, William
Dharamsey, Shabbir A.
Duckworth, Thomas S.
Dunaway, Joseph D.
Fendley, Ann E.
Fendley, Claude E.
Fendley, Herbert F.
Flowers, Martha A.
Forestiere, Lee A.
Freeman, William H.
Frigon, Jacquelyn S.
Green, Horace L.
Gullett, Robert R. Jr.
Herzog, John L. Sr.
Hughes, L. Milton
Hussain, Shafqat
Hutchison, E. L.
Hyman, Carl E.
Irwin, Raymond A. Jr.
Jacks, David C.
Jacks, Dennis
James, William J.
Jenkins, Bobby
Jenkins, Mary Ellen
Johnson, Horace
Jones, James III
Justiss, Richard D.
Khan, Mahmood A.
King, Yum Y.
Langston, Lloyd G.
Ligon, Ralph E.
Lim, William N.
Lindsey, James A.
Lum, Don
Lupo, David A.
Lytle, John O.
Mabry, Charles D.
Malik, Shamim A.
Marcus, Herschel
McDonald, Robert L.
McFarland, Mike S.
Meredith, William R.
Miller, Donald L.

Milligan, Monte C.	Lafayette County	Andrews, A. E. Jr.	Shipp, G. Carl
Mohiuddin, Mohammed J.	Harbin, Bradley	Barnes, Walter C. Jr.	Smith, Arnett D. Jr.
Mohyuddin, Adil Ibrahim	Lee, Willie J.	Blackburn, Roy Manell	Smith, Christopher T.
Morris, Harold J.		Burns, Billy R.	Smolarz, Gregory J.
Mulingtapang, Reynaldo F.		Burroughs, James C.	Solomon, J. Alan
Nagappa, Champa	Lawrence County	Campanini, D. Scott	Somerville, Patrick J.
Newan, Michael	Hughes, Joe E.	Carlisle, David L.	Stringfellow, Jerry B.
Nixon, David T.	Joseph, Ralph F.	Chandler, Rodney	Tompkins, William Jr.
Nixon, William R.	Lancaster, Ted S.	Collins, Stanley	Vereen, Lowell E.
Nuckolls, J. William	Quevillon, Robert D.	Cutler, Otis	Wade, Billy
Orange, Betty L.	Spades, Sebastian A. III	DeHaan, Jeffrey T.	Wilhelm, Frieda
Pearce, Malcolm B.	Troxel, Roger	Dildy, Edwin V. Jr.	Wilson, Thomas Laurence
Pierce, J. R. Jr.		Ditsch, Craig E.	Wren, Herbert B.
Pierce, Reid	Lee County	Dodd, N. Leland	Wren, Mark
Pierce, Ruston Y.	Balke, Susan W.	Dodge, John M.	Wright, Mark
Pollard, J. Alan	Gray, Dwight W.	Eichler, Edward A. Jr.	Wright, Nathan L.
Quimosing, Estelita M.	Ly, Duong N.	Ekanem, Felix	Yarbrough, Charles P.
Redman, Anna T.	Waddy, Leon Jr.	Ford, John Suffern	Young, Mitchell
Reid, Lloyene B.		Fournier, Donald C.	
Rhode, Marvin C.	Little River County	Gabbie, Mark	Mississippi County
Roaf, Sterling A.	Armstrong, James #	Gillean, John A.	Abraham, Anes Wiley
Roberson, George V. Jr.	Covert, George K.	Gocio, John C.	Abramson, Lawrence
Robinson, Paul F.	Peacock, Norman W. Jr.	Graham, John	Bell, Mary C.
Rogers, Henry L.	Shelton, Joseph Jr.	Green, R. Clark	Biggerstaff, Jerry
Rook, Michael J.		Gregory, John R.	Brock, Charles C. Jr.
Ross, Robert L.	Logan County	Griffin, Nancy	Cullom, Sumner R.
Rowe, David E.	Alexander, Eugene	Hall, Eric E.	Fairley, Eldon
Samuel, Ferdinand K.	Borklund, Maurice K.	Harris, C. Lynn #	Fergus, R. Scott
Shorts, Stephen D.	Buckley, Douglas A.	Hillis, Thomas M.	Grissom, David B.
Simmons, Calvin R.	Daniel, William R.	Hollingsworth, Charles E. II	Hall, Leslie
Simpson, P. B. Jr.	Enns, Wayne P.	Hughes, A. Keith	Haynes, Max G.
Smith, Paul L.	Harbison, James D.	Jean, Alan B.	Hester, Karen Calaway
Stark, James	Hasan, Shahzad	Jones, John W.	Hester, Richard
Stern, Howard S.	Roberts, William J. #	Joyce, F. E.	Hubener, Louis F.
Sullenberger, A. G.	Suguitan, Demetrio B. Jr.	Kittrell, James	Hudson, James H.
Townsend, Thomas E.	Williams, John R.	Knowles, Stanley C.	Husted, G. Scott
Tracy, C. Clyde		Loe, Arlis W.	Jones, Herbert
Trice, James	Lonoke County	McGinnis, Robert S. Sr.	Jones, Joe V.
Walajahi, Fawad H.	Abrams, Joe A.	Melton, Charles L.	Lin, Ching-Shan
Washington, Erma	Anderson, Leslie	Morris, Howard	Lowery, Russell
Wilkins, Walter J. Jr.	Braswell, Thomas	Newton, Norris L. Sr.	Osborne, Merrill J.
Wineland, Herbert L.	Chapman, Jerry C.	Newton, Norris L. Jr.	Pollock, George D.
Woods, Jerrye	Elam, Garrett	Norris, John A.	Rhodes, Joseph
Worrell, Aubrey M. Jr.	Holmes, Byron E.	O'Banion, Dennis	Rodman, T. N.
	Inman, Fred C. Jr.	Peebles, Larry M.	Russell, James D.
Johnson County	Rochelle, Joe	Price, Kevin S.	Shahriari, Sia
Goodman, James David	Schumann, Gerald M.	Robbins, Joseph	Shaneyfelt, E. A.
Kuykendall, Scott	Shurley, Floyd Jr.	Robertson, William	Smith, Ronald D.
McKelvey, Richard	Thomason, Steven L.	Robinson, Dianna L.	Williams, John
Pennington, Donald H.	Valley, Marc A.	Rountree, Glen A.	Yao, Joseph
Shrigley, Guy P.		Royal, Jack L.	
Tackett, Lee Jr.	Miller County	Sarna, Paul D.	Monroe County
	Alkire, Carey	Sarrett, James	Campos, Amador

Collins, Linda
David, Neylon C. Jr.
Pham, Dac Tat
Pupsta, Benedict F.
Stone, Herd E. Jr.
Walker, Walter L.

Ouachita County

Alhariri, Mirfat
Braden, Lawrence F.
Brunson, Milton
Crump, Mark
Daniel, William A.
Dedman, William D.
Floss, Robert
Fohn, Charles H.
Guthrie, James
Hopson, Deanna
Hout, Judson N.
Jameson, John B. Jr.
Kendall, Jerry R.
Martin, Dan
McFarland, Gale
Miller, John H.
Mosley, David
Nunnally, Robert H.
Ozment, L. V.
Sanders, Cal R.
Shrestha, Bal Narayan
Thorne, Arthur E.

Phillips County

Athota, Prasad J.
Barrow, John H. Jr.
Bell, L. J. Patrick
Bell, L. J. Patrick II
Berger, Alfred A.
Cruz, Eduardo V.
Epstein, S. Mitchell
Faulkner, Henry N.
Frederick, William Ronald
Hall, Scott
McCarty, Charles P.
McCarty, Gordon E. Jr.
McDaniel, Marion A.
Michel, Harry
Miller, Robert D. Jr.
Paine, William T.
Patton, Francis M.
Rangaswami, Bharathi
Rangaswami,
 Narayanaswami
Tan, Benjamin

Tucek, Ladd
Tukivakala, P. Reddy
Vasudevan, Kanaka
Vasudevan, P.
Winston, William II
Wise, James E. Jr.

Polk County

Beckel, Ron Jr.
Brown, David P.
Finck, John Henry
Fried, David D.
Lochala, Richard
McClard, Helen
Mesko, John D.
Sosa, Humberto J.
Tinnesz, Thomas
Wood, John P.

Pope County

Ashcraft, Ted
Austin, Nathan
Bachman, David S.
Barron, William G.
Barton, A. Dale
Battles, Larry D.
Beavers, H. Kevin
Bell, Linda O.
Bell, Michael
Bell, Robert A.
Berner, Dennis W.
Birum, Patricia J.
Bradley, Stanley C.
Brown, Charles H.
Brown, William Bruce
Burgess, James G.
Callaway, Jody C.
Carter, James M.
Cloud, Joe A.
Crouch, James Jr.
Crumpler, Joe B. Jr.
Cunningham, James A.
Dunn, Donald L.
Ewing, Donald C.
Ferris, Craig A.
Frais, Michael A.
Galloway, William W.
Gately, Stanley
Haines, Lynn
Hale, Jeffrey
Harden, V. Anthony
Harrison, Rick
Henderson, Vickie L.

Hendren, Mike
Hill, Donald F.
Hines, Cynthia C.
Honghiran, Ted
Jones, Charles Jr.
Kerin, Douglas
Khan, Gul Rukh
Killingsworth, Stephen M.
King, John W.
King, W. Ernest Jr.
Kolb, James M. Jr.
Kriesel, Ben J.
Lawrence, Frank M.
Lovell, Richard K. Sr.
Lowrey, Douglas H.
Lyford, Joe H. Jr.
Massey, V. Rudolph
Mauch, E. Jane
May, Robert H. Jr.
McCraw, Barry W.
Meyer, Kelly H.
Miller, Mark E.
Monfee, Andrew M.
Murphy, David S.
Myers, J. Mark
New, Kenneth O.
Richison, George C.
Rickey, Jean M.
Riddell, C. Michael
Riley, Don C.
Robertson, William T.
Soto, Sergio F.
Stoltz, Gerald A. Jr.
Stone, Timothy
Tapley, Thomas S.
Teeter, Stanley D.
Thurlby, W. Robert
Turner, Finley P. II
Turner, Kenneth B.
White, Ronald
Wilkins, Charles F. Jr.
Williams, David M.
Williams, Thomas C.
Young, Sandra S.

Pulaski County

Abbott, William W. #
Abel, Lee C.
Abraham, Dana C.
Abraham, James H.
Abraham, James H. III
Ackerman, William E. III
Adametz, James

Adametz, John Sr.
Adametz, Kimberly
Adams, Christopher
Adamson, James
Alexander, Albert S.
Alford, T. Dale
Allen, Durward Jr.
Allen, John E. Jr.
Alston, Phillip
Amir, Jacob
Aquino, Al
Araoz, Carlos
Archer, Robert L.
Armstrong, Howard
Arrington, Robert
Astle, Hal
Atha, Timothy C.
Atkinson, William Jr.
Baber, John C. Jr.
Baber, John T.
Backus, Joe T.
Bailey, H. A. Ted Jr.
Baker, Glen F.
Baker, John W.
Baker, Johnson
Baldwin, Maxwell R.
Ball, Charles W. Jr.
Baltz, Brad Patrick
Barber, Jeffrey
Barber, Laurie
Barclay, David
Bard, David S.
Bard, John L.
Barger, Denver L.
Barlow, Brian E.
Barnes, C. Lowry
Barnes, Reginald
Barnes, Robert W.
Barnett, David
Barnett, Troy F.
Barron, Edwin N. Jr.
Bartnicke, Benjamin J.
Barton, Gary
Baskin, Barry
Bates, Ramona
Bates, Stephen
Batres, Francisco
Bauer, David
Bauer, F. Michael
Bauer, Frank M. Jr.
Bauman, David C.
Bayliss, John M.
Beadle, Beverly

Bearden, James R.	Brown, Michael	Christian, John D.	Diner, Bradley
Beaton, J. Neal	Brown, Pamela S.	Christiansen, Stephen P.	Dixon, Keith A.
Beau, Scott	Brown, Randel	Christy, George W.	Dodd, Doyne
Beck, Joseph II.	Brown, Steven L.	Chudy, Amail	Doncer, Richard P.
Becquet, Norbert J.	Browning, Donald G.	Church, Marion M.	Doucet, Marlon J.
Belknap, Melvin L.	Browning, Stanley K.	Church, Michael	Douglas, Warren M.
Bell, Rex H.	Bruce, Thomas A.	Clark, J. Roger	Downs, Ralph A.
Bennett, Eaton W.	Brunson, Ashley	Clark, Richard B.	Dungan, William T.
Bennett, F. Anthony Jr.	Bryan, James W. IV	Clift, Steven A.	Dwyer, Gregory A.
Benton, William	Buchanan, Francis R.	Clifton, Cliff	Eans, Thomas L.
Berry, Robert L.	Buchanan, Gilbert A.	Clogston, Charles W.	Easter, Rex M.
Bevans, David W. Jr.	Buchman, Joseph A.	Cobb, Jock S.	Edge, Otis H.
Bienvenu, Gregory	Buchman, Joseph K.	Cockrill, H. Howard Jr.	Edmiston, Frank G.
Bienvenu, Harold G. III.	Bucolo, Anthony P.	Cogburn, Bob E.	Eisenach, R. Jeffrey
Bierle, Michael	Buford, Joe L.	Colclasure, Joe B.	English, Jim
Billie, James	Burger, Robert A.	Collins, David	Eudy, Sidney
Biondo, Raymond V.	Burnett, Hugh F.	Collins, Kevin J.	Evans, Billy
Birkett, Ian McRae	Burnett, P. Susan	Colwell, Karen Louise	Evans, Samuel C.
Bishop, Lisa M.	Burrow, Dennis R.	Cone, John	Farmer, Joseph F.
Bishop, William B.	Butcher, Joan R.	Contrucci, Ann L.	Farque, Greg L.
Biton, Victor	Byrum, Jerry	Cook, Timothy R.	Farris, Guy R. Jr. #
Black, H. Thurston #	Calcote, Robert A.	Cope, Michael	Fawcett, Deborah Dee
Blackshear, Jack L. Jr.	Calderon, Vincent Jr.	Corbitt, Mary	Fernandez, Agustin
Blair, Susan	Calhoon, J. Dale	Cornell, Paul J.	Ferris, Ernest J.
Blankenship, William F.	Calhoun, Joseph D.	Cosgrove, Kingsley W. Jr. #	Fewell, Ronald D.
Blasier, R. Dale	Calhoun, Richard A.	Coussens, David M.	Fielder, Charles R.
Boehm, Timothy	Calkins, Joe B. Jr.	Crawford, Cary M.	Fields, Patrick R.
Boellner, Samuel W.	Campbell, Gilbert S.	Crews, J. Travis	Finan, Barre F.
Boger, James E.	Campbell, James W.	Crocker, Charles H.	Fincher, Robert L.
Book, Lindy	Campbell, Leah S.	Cross, J. B.	Fiser, Martin
Boop, Frederick	Caplinger, Kelsy J. III	Crow, Joe W.	Fiser, Robert H. Jr.
Boop, Warren C. Jr.	Capps, Dwight II	Crow, R. Lewis Jr.	Fiser, William P. Jr.
Bornhofen, John H.	Carfagno, Jeffrey	Crowell, Karen D.	Fitzgerald, Charles
Bost, Roger B.	Carle, Scott W.	Curtner, Byron D.	Fitzhugh, A. Stuart
Bourne, David E.	Carson, Layne E.	Darwin, William G.	Flack, James V. Jr.
Bowen, W. Scott	Carter, Jerry L.	Daugherty, Joe D.	Flaming, Jay
Bower, Charles M.	Carttar, Charles	Daugherty, John L.	Fletcher, Anthony
Boyd, Charles M.	Caruthers, Carol	David, Alex	Fletcher, Elizabeth D.
Bradburn, Curry B. Jr.	Caruthers, Samuel B. Jr.	Davie, Melanie	Fletcher, Thomas M.
Bradford, J. David	Casali, Robert E.	Davila, David G.	Florez, James P.
Bradley, Joe F.	Cash, Darlene	Davis, Glenn R.	Floyd, Bill G.
Brainard, Jay O.	Casper, Robert B.	Davis, J. Lynn	Forte, Judith L.
Bratton, Nita	Casteel, Helen	Dean, David M.	Foster, Gil
Bressinck, Renie E.	Cathey, Janet	Dean, Gilbert O.	Fraiser, Lacy P.
Brewer, Robert	Cathey, Steven	Deaton, C. William Jr.	France, Gene L.
Brewer, Thomas E.	Chai, Sandra	Deer, Philip J. Jr.	Fraser, Eric A.
Brimberry, Ronald K.	Chakales, Harold H.	Deer, Philip James III	Frazier, Cynthia
Brineman, John	Chandler, Billy M.	Dennis, James L.	Frazier, G. Thomas
Brinkley, Roy A.	Chappell, Carol W.	DesLauriers, S. Killeen	Freeman, Diane
Brizzolara, A. J.	Cheairs, David B.	Dickins, John R. E.	Fuller, C. Dale
Brizzolara, John Paul	Cheairs, John T.	Dickins, Robert D. Jr.	Fuller, C. James III
Broach, R. Fred	Chisholm, Dan P.	Dickson, D. Bud	Fulmer, John M.
Broadwater, John Ralph Jr.	Choate, Robert B.	Dillard, Daniel C.	Galbraith, Robert C.

Gardner, Guy F.	Harris, T. Stuart	Hudec, Regina	Kilgore, Reed W.
Garrett, Nina	Harris, W. Turner	Hughes, Ronald D.	King, Michael T.
Gettys, Joseph M. Jr.	Harrison, A. Vale	Hundley, Randal F.	King, W. David
Gibbs, Mark	Harrison, Roy E.	Hurlbut, Kimberly	Kittler, Fred J.
Giblin, John M.	Harrison, William	Hutchins, Laura	Kizziar, Jim C.
Gibson, Gordon L.	Harshfield, David Lee Jr.	Hutchins, Steven W.	Klein, E. F. "Bud" Jr.
Giglia, Anthony R. III	Hart, Thomas M.	Hutson, Harold G.	Klimberg, V. Suzanne
Giles, Wilbur M.	Harter, Scott	Ingram, Jim	Knott, Patricia A.
Gillespie, A. Tharp	Hathcock, Stephen A.	Jackson, J. Presley	Knox, Michael F.
Gilliam, David	Hauer-Jensen, Martin	Jackson, Thomas	Kolb, Agnes J.
Gist, Charles C.	Hawley, Harold B.	Jansen, G. Thomas	Kolb, David
Glenn, Wayne B.	Hayden, William F.	Jefferson, Terry	Kolb, W. Payton
Glidden, Michael L.	Hayes, J. Harry Jr.	Johnson, Anthony D.	Koonce, Thomas W.
Glover, Lawson E. Jr.	Hayes, Richard L.	Johnson, B. Richard	Kovaleski, Thomas M.
Glover, W. Clyde	Hayes, Sidney P.	Johnson, Ben D.	Kozlowski, Karen J.
Golden, William E.	Haynes, W. Ducote	Johnson, Carl	Krulin, Gregory S.
Goldsmith, Geoffrey	Headstream, James W.	Johnson, Clifton R.	Kumpuris, Andrew G.
Gosser, Bob L.	Hearnsberger, H. Graves III	Johnson, Dianne Flowers	Kumpuris, Dean
Goza, George M. Jr.	Hearnsberger, Henry G. Jr.	Johnson, Henry D.	Kumpuris, Frank G.
Grant, Karen G.	Hearnsberger, John E.	Johnson, M. Bruce	Kyle, Joan E.
Green, Benny J.	Hedges, Harold IV.	Johnson, Philip H.	Kyser, J. Floyd
Greenway, C. Don	Hedges, Harold H.	Johnston, Dale E.	Laakman, Robert W.
Greenwood, Denise R.	Hefley, Bill F.	Johnston, Kenneth	Lambert, Robert A.
Greer, G. Stephen	Hefley, William Jr.	Jones, Eugene	Landers, James H.
Greutter, John E. Jr.	Henker, Fred O. III	Jones, Gail Reede	Landgren, Robert C.
Griebel, Jack A. Jr.	Henry, C. Reid Jr.	Jones, Garry L.	Lane, John W.
Grimes, H. Austin	Henry, Charles R. Sr.	Jones, John C.	Lang, Nicholas P.
Guard, Peggy K.	Henry, D. Andrew	Jones, Kathleen C.	Langford, Timothy
Guggenheim, Frederick G.	Henry, G. Michael	Jones, Robert D.	Lehmberg, Robert W.
Guin, Jere D.	Henry, G. Morrison	Jones, Roy Steven	Leibovich, Marvin
Gurley, Thomas D.	Henry, J. Charles	Jones, S. Michael	Leithiser, Richard Jr.
Hagans, James III	Henry, J. Forrest Jr.	Jones, William N.	Leonard, Donald G.
Hagler, James L.	Henry, Richard Y.	Jordan, F. Richard	Leou, Frank J.
Hahn, Herbert	Henry, William T.	Jordan, Randy A.	Lewis, Derek
Hall, A. D.	Henson, Gregory N.	Joseph, Ralph F. II	Lile, Henry A.
Hall, A. David	Herbert, R. Wayne	Joseph, William Frank	Lincoln, Ben M.
Hall, Gregory S.	Herron, Jerry M.	Jouett, W. Ray	Lipke, Jay M.
Hall, R. Whit	Hickey, Joseph P.	Joyce, John W.	Loebl, Edward C.
Hamilton, George Jr.	Hicks, David C.	Junkin, Ruth H.	Logan, Charles W.
Hampton, John R. III	Hicks, David L.	Kaemmerling, Raymond E.	Love, Tommy L. Jr.
Hankins, Edwin III	Hixson, Marcia Lynn	Kahn, Alfred Jr.	Lowe, Betty A.
Hanna, Ehab	Hodges, J. Timothy	Kamanda, Stella M.	Ludwig, Frank R.
Harber, Harley	Hodges, Steven C.	Kane, James J.	Luttrell, Rex E.
Hardberger, R. E.	Hoffmann, Thomas H.	Keeran, Michael G.	Lyons, Virgle E. Jr.
Hardin, Robert	Holland, Jay D.	Keith, Sharon C.	Mabrey, William
Hardin, Ronald D.	Holloway, J. Douglas	Kellar, Stanley L.	Magie, Stephen K.
Harger, C. Harold	Holt, Stephen	Keller, Alfred W.	Mallory, John A.
Hargrove, Joe L.	Holton, Jerry C.	Keller, Kevin	Maloney, F. Patrick
Harper, Gary E.	Hopkins, Karmen	Kennedy, Charles H.	Maners, Ann
Harrendorf, Cagle	Hough, Aubrey J. Jr.	Kennedy, Eleanor E.	Mann, R. Jerry
Harrington, Gregory S.	Houk, Richard	Kennedy, H. Frazier	Marable, Charles T.
Harrington, Mariann	Houston, Samuel	Ketcham, Jeffrey	Markland, Gary S.
Harris, Donald R.	Howell, Coburn S. Jr.	Key, J. Michael	Marks, Stephen R.

Martin, Kenneth A.	Moore, J. Malcolm Jr.	Parker, Ray K.	Robinson, Matthew
Martin, Richard H.	Moore, Michael	Parkhurst, James	Rodgers, C. Dudley
Marvin, Peter	Moore, Rex N.	Parmley, Tim	Rodgers, Charles H.
Mason, J. Zachary	Moore, Robert B.	Parnell, Clifton L. III	Rooney, Thomas P.
Mason, William L.	Moore, Thomas	Paulus, Thomas E.	Rosenbaum, Carl A.
Matchett, W. Jean	Morris, Barbara	Payne, Cheryl	Ross, Ashley Sloan
Matthews, Joseph W.	Morris, W. Dale	Pearce, Charles E.	Ross, Cynthia
McAdoo, Hosea W. Jr.	Morrison, Debra F.	Peek, Richard	Ross, Robert W. #
McCarthy, Richard E.	Morse, James C.	Peeples, R. Earl	Ross, S. William
McConnell, John D.	Morton, William J.	Peters, John E.	Rounsville, Harry L.
McCoy, Julia M.	Mulholland, James S.	Peters, Phillip J.	Roy, F. Hampton
McCracken, Gail Ann	Mumme, David	Petrash, Anton 'Tony'	Ruddell, Deanna N.
McCracken, John	Murphy, Bruce	Petrus, Gary M.	Ruggles, Dwayne L.
McCravy, George A.	Murphy, James E. Jr.	Petursson, Gissur J.	Runyan, William A. #
McCutcheon, Frank B. Jr.	Murphy, Jeanne	Pevahouse, Joe	Russell, Anthony E.
McDonald, James E.	Murphy, Joseph	Phillips, Charles E.	Russell, James B.
McDonald, Judy	Murphy, Randolph	Phillips, Hannah	Rutledge, William L.
McGowan, Robert Jr.	Murphy, Robert	Pierce, William	Ryals, Rickey O.
McGrew, Robert N.	Nagel, Fred G.	Pike, John D.	Saer, Edward H. III
McKelvey, K. David	Nance, Melvin E.	Pledger, Norman R.	Safman, Bruce L.
McKinney, Carl	Nash, John C.	Pollard, Arlee E.	Samlaska, Susan K.
McKinnon, L. Jane	Nelson, Alvah J. III	Pollock, Michael Marion	Sanders, Kelli K.
McKnight, C. Allen	Nelson, Carl L.	Pope, David	Santoro, Ian H.
McLeane, Mark	Nestrud, Richard M.	Pope, Norton A.	Satre, Richard W.
McMahon, Robert M.	Newbern, D. Gordon	Porter, Robert Jr.	Schellhase, Dennis E.
McMillin, F. Lamar Sr.	Newsum, Jon Kirby	Potts, Jerry L.	Schlesinger, Scott Michael
McNair, James R.	Newton, Fred E.	Power, Robert C.	Schock, Charles C.
McNee, Valerie	Nguyen, Duong	Prather, Jerry L.	Schratz, Bruce E.
McPeak, Lisa	Nichols, Roger D. II	Primack, Daren S.	Schroeder, George T.
Meacham, Donald F.	Nichols, Sandra D.	Pringos, Andrew A.	Schultz, John C.
Meador, Annette Parker	Nix, Richard A.	Pyle, Hoyte R. Jr.	Schwander, L. Howard
Meadors, Frederick	Nokes, Steven	Quirk, J. Gerald	Schwankhaus, John D.
Meadors, John	Norris, Lloyd P.	Rahman, Holly	Scott, Don I.
Medlock, Rickey D.	Norton, George A.	Ransom, John M.	Scott, Jane F.
Mehta, Madhu	Norton, Joseph A.	Rapp, Richard J.	Scruggs, Jan W.
Mellor, Roy II	Nowlin, James Bill	Raque, Carl J.	Searcy, Robert M.
Mendelsohn, Lawrence A.	Nugent, Richard	Ray, V. Gail	Seguin-Calderon, Rosa Elia
Metrailler, James A.	Oates, Gordon P.	Rector, Nancy F.	Seibert, Joanna J.
Metzer, W. Steve	Oddson, Terrence A.	Reding, David L.	Seibert, Robert
Meziere, Tom	Oglesby, Walter R.	Redman, John F.	Selakovich, Walter G.
Miles, David A.	Osam, Patrick N.	Reed, Ewing C. Jr.	Sessions, Louis II
Miller, Forrest B. Jr.	Osteen, Paul	Reese, William G.	Sheppard, Joseph
Miller, Raymond P. Sr.	Overacre, Robert	Reid, Gene W.	Shields, Eddie
Milner, E. L.	Owen, Richard Jr.	Remmel, Raymond	Shock, John P.
Mitchell, George K.	Owings, Debra #	Rice, Charles	Short, Harold K.
Mizell, Philip	Owings, Richard	Rice, James Curtis	Shott, Joseph
Mizell, Walter S.	Ozment, Kerry	Rice, Robert L.	Shuffield, James
Moffett, T. Robert Jr.	Padberg, Frank T.	Riddle, John F. Jr.	Silvoso, Gerald R.
Money, Wandal D.	Paddock, George	Riley, William H.	Silzer, Robert R.
Montanez, Josue	Padilla, Fernando	Ritchie, Robert Ross	Simmons, Orman W.
Montgomery, Lori	Pahls, Wendell Lee	Robbins, Kenneth	Sims, James M.
Mooney, Donald K.	Pappas, James J.	Roberson, Michael C.	Singer, Peter
Moore, Burton A.	Parker, J. Mayne	Roberts, Kevin	Singleton, L. Gene

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Sinor Kennedy, Elicia	Talbert, Gary Eugene	
Sipes, Frank M.	Talbert, Michael L.	
Skokos, C. Kemp	Tamas, David E.	
Slater, John G. Jr.	Tanner, James A.	
Slaven, John E.	Taylor, David R.	
Slayden, John E.	Taylor, Eugene H.	
Sloan, Eugene E.	Tedford, John G.	
Sloan, Fay M.	Tharp, John G.	
Smart, Douglas F.	Thomas, A. Henry	
Smelz, Johnny	Thomas, Peter O.	
Smith, Aubrey C.	Thompson, John R.	
Smith, Charles W.	Thompson, S. Berry Jr.	
Smith, David E.	Thompson, Steven M.	
Smith, Douglas B.	Thomsen Hall, Kathleen	
Smith, G. Richard Jr.	Thorn, G. Max	
Smith, James L.	Thrower, Rufus	
Smith, Purcell Jr.	Tilley, Steve	
Smith, Thomas J.	Tolleson, Claudia	
Smith, Thomas W.	Towbin, Eugene J.	
Smith, Tom	Tracy, Phillip A.	
Smith, Vestal B. Jr.	Tranum, Bill L.	
Snyder, Steven D.	Tressler, Samuel D. III	
Snyder, Victor F.	Trigg, Laura	
Somers, A. Jack	Tseng, Jyi-Ming	
Sorrells, R. Barry	Tucker, R. Stephen	
Sotomora, Ricardo F.	Tucker, W. Everett	
Squire, Arthur E. Jr.	Valentine, Robert G. Jr.	
St Amour, Thomas E.	Van Zandt, Janelle	
Stallings, James Walt	Vaughter, W. Roger	
Stanley, Joe P.	Velez, L. Duane	
Stanley, Robert	Vinsant, Kurtis	
Stefans, Vikki Ann	Vogel, Robert G.	
Stephens, Wanda	Wade, William I. Jr.	
Stern, Scott Jeffrey	Wagoner, Jack	
Sternberg, Jack J.	Walker, Lee	
Stewart, Daryl	Walker, Ronald	
Stewart, Marguerite R.	Walt, James R.	
Stinnett, Thomas	Waner, Milton	
Stokes, B. Douglas	Ward, Harry P.	
Storeygard, Alan R.	Ward, Joseph P.	
Stotts, John R.	Ward, Thomas	
Stout, Kimber	Warford, Walton R. #	
Strauss, Mark	Watkins, Charles J.	
Stringer, Warren	Watkins, John Jr.	
Strode, Steven W.	Watkins, John G. III	
Stroope, George F.	Watkins, Julia	
Studdard, James D.	Watkins, Larry S.	
Sturdivant, Stephen	Watson, Daniel W.	
Suen, James	Watson, Vye B.	
Sulieman, J. Samir	Weber, Edward R.	
Sullivan, Charles D.	Weber, James R.	
Sullivan, Jan R.	Weber, Michael	
Sundermann, Richard H.	Weiss, David W.	
	Weiss, Gerald N.	
	Welch, Samuel Bradley	
	Wellons, James A. Jr.	
	Wende, Raymond A.	
	Wenger, Carl E.	
	Westbrook, Kent C.	
	Westbrook, September	
	Westerfield, Frank M. Jr.	
	Westerfield, Robert	
	White, Oba B.	
	Whiteside-Michel, Julia	
	Wilkes, Elbert H.	
	Wilkes, T. David I.	
	Williams, Alonzo D.	
	Williams, C. David	
	Williams, G. Doyne Jr.	
	Williams, Paul E.	
	Williams, Ronald N.	
	Williamson, Adrian III	
	Wills, Pamela	
	Wilson, Elaine	
	Wilson, Frances C.	
	Wilson, Frank J. Jr.	
	Wilson, I. Dodd	
	Wilson, James Michael	
	Wilson, James W.	
	Wilson, John L.	
	Wilson, R. Sloan	
	Wolverton, John	
	Workman, W. Wayne	
	Wortham, Thomas H.	
	Wyatt, Richard A.	
	Yamauchi, Terry	
	Yaseen, Mohammad	
	Yee, Suzanne	
	Yocom, John	
	Young, Douglas E.	
	Young, Evelyn	
	Yousuff, Sarah S.	
	Ziller, Stephen A. III	
	Ziomek, Stanley	
		Randolph County
	Baltz, Albert L.	
	Barre, Hal S.	
	Corcoran, Gavin R.	
	DeClerk, Thomas	
	Guntharp, George	
	Holt, Danny B.	
	Jansen, Andrew J. III	
	Landis, Mark A.	
	Scott, William W.	
	Smith, Norman K.	
		Sebastian County
	Acklin, Jimmy D.	
	Al Mounajed, Ghanem	
	Al-Ghussain, Emad A.M.M.	
	Albers, David G.	
	Alberty, Joe	

Anderson, Paul	Dudding, William F.	Jones, Greg T.	Moore-Farrell, Laura
Armstrong, Sinclair Jr.	Edwards, Gary	Kannout, Fareed	Mosley, Myra C.
Atkins, Jimmie G.	Ellis, Homer G.	Kareus, John L.	Moulton, Everett C. Jr.
Axelsen, Nils K.	Ennen, Randy	Kelly, Thomas C.	Moulton, Everett C. III
Bailey, Charles W.	Feder, Frederick P. Jr.	Kelsey, J. F.	Mumme, Marvin E.
Baker, Max A.	Feezell, Randall E.	Keyashian, Mohsen	Muylaert, Michel
Balsara, Zubin	Feild, T. A. III	Kientz, John Jr.	Nassri, Louay K.
Barker, Robert Jr.	Felker, Gary V.	Klopfenstein, Keith	Nelson, Steve B.
Barnes, L. Ford	Ferrell, Jeffrey	Knight, William E.	Nichols, David R.
Barr, Marilyn	Fisher, Robert D.	Knox, Robert	Niemann, Jeffrey M.
Barry, James Jr.	Flanagan, A. Dean	Knubley, William A.	Nolewajka, Andre J.
Barsik, Tamara	Fleck, Randolph Peter	Kocher, David B.	O'Bryan, Robert K.
Beachy, Allen L.	Fleck, Rebecca	Koenig, Albert S. Jr.	Olson, John D.
Beene-Lowder, Hannah L.	Flippin, Tony A.	Kradel, R. Paul	Paris, Charles H.
Berryhill, Richard E.	Florian, Thomas	Kramer, Ralph G.	Parker, Joel E. Jr.
Berumen, Mike	Floyd, Charles H.	Kutait, Kemal E.	Parker, Thomas G.
Best, Timothy R.	Francis, Darryl R. II	Kyle, W. Lamar	Patrick, Donald L.
Beyer, H. Stephen	Franz, F. Perry	Lambotte, Louis O.	Payson, Tony A.
Bise, Roger N.	Frederick, James A.	Landherr, Edwin	Pearce, Larry W.
Bodiford, Gary L.	Gamble, Cory	Landrum, Samuel E.	Peluso, Francis
Bordeaux, Ronald A.	Gardner, Kenneth	Lane, Charles S. Jr.	Pence, Eldon D. Jr.
Bouton, Michael	Gedosh, Edgar A.	Lenington, Jerry O.	Phillips, Don
Bradford, A. C.	Gill, James A.	Lewis, George L.	Phillips, Kevin Clark
Brown, Byron L.	Girkin, R. Gene	Lilly, Ken E.	Phillips, Sumer
Brown, James A.	Glover, D. Bruce	Little, Charles	Phillips, Tonya
Brown, Richard	Goodman, R. Cole Jr.	Lockwood, Frank M.	Pillstrom, Lawrence G.
Buie, James H.	Goodman, Raymond C. Sr.	Long, James W.	Poole, M. Louis
Bulteman, Cynthia	Griggs, William L. III	Loyd, Gregory M.	Porter, Neill C.
Bulteman, James	Gwartney, Michael P.	MacDade, Albert D.	Post, James M.
Burks, Deland	Hamilton, Lance	Magness, Jack L. Jr.	Prewitt, Taylor A.
Busby, J. David	Hanley, Larry L.	Manus, Stephen C.	Price, Claire
Cain, Martin	Harmon, Pamela	Marsh, Michael A.	Price, Lawrence C.
Callaway, Michael	Harris, Shirley D.	Martimbeau, Claude	Rabideau, Dana P.
Carson, Randall L.	Hathcock, Alfred B.	Martin, Art B.	Raby, Paul L.
Cassady, Calvin R.	Hendrickson, Jon	Martin, Rick	Raymond, Thomas H.
Cesar, Luis Geraldo G.	Henry, James	Marvel, Jeffrey	Reese, Valerie
Chalfant, Charles	Herren, Adrian L.	Mason, Clinton	Rivera, Ernesto
Chester, Robert L.	Hewett, Archie L.	Masri, Hassan M.	Robinson, Ronald P.
Cheyne, Thomas	Hewett, Mark Alan	Mauroner, Richard F.	Rodgers, Brian H.
Chosney, Bruce	Hoffman, John D.	McCarty, Joseph	Russell, Rex D.
Coffman, Edwin L.	Hoge, Marlin B.	McClain, Merle	Sanders, Robert E.
Coleman, Michael D.	Holmes, Williams C. Jr.	McClanahan, J. David	Sanders, Robert V. III.
Cook, Charles	Hornberger, Evans Z. Jr.	McCraw, Gordon	Saviers, Boyd M.
Craft, Charles	Howell, James T.	McEwen, Stanley R.	Schemel, William H.
Crow, Neil E. Sr.	Hughes, Robert P. Jr.	McKinney, Robert	Schkade, Paul A.
Crow, Neil E. Jr.	Hunton, David W.	McMinimy, Donald	Schmitz, James
Culp, William C.	Huskison, William T.	Meade, Arturo E.	Schroeder, Cygnet
Davenport, O. Leo	Ihmeidan, Ismail H.	Meador, Don M.	Schwarz, Julio
Deaton, John M.	Ingram, Ralph N.	Mehl, John Kurt	Schwarz, Paul R.
Deneke, James S.	Irwin, Peter J.	Miller, Robert C.	Seffense, Stephen J.
Diment, David D.	Jaggers, Robert	Miller, Robert M.	Seiter, Kenneth
Dorzab, Joe H.	Janes, Robert H. Jr.	Mings, Harold H.	Shahbandar, A. B.
Drolshagen, Leo F. III	Jefferson, Thomas C.	Moore, Trudy J.	Sherrill, William M. Jr.

Short, Bradley Mark
Smith, Kent
Smith, Terrald J.
Snider, James R.
St.Clair, Kevin
Standefer, J. Michael
Stanton, William B.
Stewart, Jerry R.
Stewart, John B.
Still, Eugene F. II
Stillwell, Mark
Studt, James
Swicegood, John R.
Taft, Eileen
Taft, Eric
Tait, Amy
Teeter, Mark
Thompson, J. Kenneth
Thompson, Robert J.
Tinsman, Thomas
Tisdale, Bernard
Torres, Stephen
Turner, William F.
Van Asche, Christopher
Vanderpool, Roy E.
Vernon, Rowland P. Jr.
Waack, Timothy
Wallace, Kenneth K.
Webb, William K.
Weisse, John J.
Wells, John D.
Westbrook, Michael R.
Westerfield, Samuel
Westermann, Norman F.
Whiteside, Edwin
Wikman, John H.
Williams, Carl L.
Wills, Paul I.
Wilson, Morton C.
Wolfe, Michael S.
Woods, Leon P.
Woodson, Mark
Wright, Timothy F.
Zufari, Munir M.

Sevier County

Buffington, Mike
Couture, Susan E.
Hoyt, Jonathan
Jones, Charles N.
Jones, Thomas
Mielnick, Alina
Stearns, David E.
Vogan, Cheryl L.
Wilson, Timothy

St. Francis County
Collins, E. Morgan Jr.
Conner, George
Fong, Fun Hung
Guillermo, Enrique C.
Hammons, Edward P.
Hashmi, Shakeb
Iskander, Henein
Kumar, Sudhir
Lopez, Ramon E.
Meredith, James Jr.
Patton, W. Curtis
Schwartz, Frank R.
Webber, David L.

Tri-County

Arnold, Carl
Arnold, Griffin II
Benton, Thomas H.
Bozeman, Jim G.
Campos, Louis
Grasse, A. Meryl
Jackson, George W.
Krygier, Albin J.
Lane, Robert C.
Moody, Michael N.
Relyea, William V.
Tatum, Harold M.
Tucker, Charles L.
Varela, Charles D.
Wright, Donald

Union County

Abbott, Judy
Anzalone, Gary
Arceneaux, Matt
Barenberg, Andrew
Barenberg, Robert
Bevill, Gary L.
Booker, J. Gregory
Bowman, Raymond N.
Bryant, D'Orsay III
Callaway, Matthew Dates
Carroll, Peter J.
Cyphers, Charles D.
Daniels, C. Dwayne
Davis, Richard K.
Deere, Joy
Dixon, R. Mark
Dougherty, Bert
Duzan, Kenneth R.
Elliott, Wayne G.
Ellis, Jacob P.
Fitch, Leston E. #
Forward, Robert B.
Fraser, David B.

Giller, W. John Jr.
Harper, William L.
Hill, Grady Jr.
Jenkins, Chester W.
Jones, Steve A.
Jucas, Diana T.
Jucas, John J.
Kang, Gurprem Singh
King, Billy D.
Landers, Gardner H.
Menendez, Moises A.
Moore, John H.
Murfee, Robert M.
Ong, Tie S.
Pillsbury, Richard C.
Pirnique, Allan S.
Ratcliff, John
Ray, Robin Phinney
Rogers, Henry B.
Sample, Dorothy C.
Sarnicki, Joseph
Schultz, Wayne H.
Scurlock, William R.
Seale, James E. Jr.
Sheppard, Julius
Smith, George W.
Sokolyk, Stephen M.
Stevens, Willis M. Jr.
Talley, H. Aubry
Tolosa, Elizabeth
Tommey, C. E.
Tommey, Robert C.
Turnbow, R. L.
Ulmer, Minna I.
Vasan, Sriniv
Warren, George W.
Weedman, James B.
Williamson, John R.
Wilson, Larkin M. Jr.
Yocom, David M. Jr.
Zahniser, Donna J.

Van Buren County

Hall, John A.
Pearce, Charles G.
Smith, James F.
Starnes, Harry

Washington County

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Albright, Spencer III
Allen, B. Eual
Applegate, C. Stanley Jr.
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Atwood, H. Daniel
Bailey, Donald C.
Bailey, Scott
Baker, C. Murl Jr.
Baker, Donald B.
Baker, James
Ball, Charles
Bays, L. Jerald
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Blankenship, James
Bonner, Mark
Box, Ivan H.
Boyce, John M.
Bredfeldt, Raymond
Brooks, D. Wayne
Brooks, W. Ely
Brown, Bruce B. Jr.
Brown, Craig
Brown, David L.
Brunner, John A. III
Bugbee, William D.
Burnside, Wade W. Jr.
Burton, Anthony R.
Butler, G. Harrison
Cale, Charles
Cannon, Robert
Carver, Joel D.
Chase, Patrick R.
Cherry, James F.
Coker, Tom Patrick
Cole, George R. Jr.
Cooper, Craig
Councille, Clifford C. Jr.
Covey, M. Carl Jr.
Crittenden, David R.
Crocker, Thermon R.
Cross, Michael J.
Cunningham, Darrin D.
Danks, Kelly R.
Davis, David A.
Davis, Randall
Decker, Harold
Deen, Lewis S.
Denley, Thomas
Dodson, C. Dwight
Dorman, John W.
Duke, David D.
Duncan, Philip E.
Dykman, Thomas R.
Eck, Gareth
Edmondson, Charles T.
Fincher, G. Glen
Fink, Roger Lee II
Fish, Ted J.
Fossey, Carol
Gardner, Buford M.
Garibaldi, Byron T.

- Garner, Hershel H.
 Ginger, John D.
 Gray, Dalton L. II
 Gear, Danna
 Grote, Walton
 Haisten, James
 Hall, Ben
 Hall, Joe B.
 Hamilton, Herbert E.
 Harris, David Jay
 Harris, Murray
 Harris, Paul L.
 Harris, W. Duke
 Harrison, William F.
 Hart, Hamilton R.
 Haynes, James
 Hayward, Malcolm L. Jr.
 Hedberg, Curtis
 Heinzelmann, Peter R.
 Hendrycy, Paul R.
 Henry, Morriss M.
 Higginbotham, Hugh B.
 Higginbotham, William
 Hoffman, Carl E.
 Holden, Donnie
 Hollomon, Michael
 Hui, Anthony
 Hurlbut, Kevin
 Hutson, Martha
 Hutson, Sanford E. III
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 Ivy, Donald
 Jay, Gilbert D. III
 Johnson, Miles M.
 Knox, D. Luke
 Koehn, Laura J.
 Kraichoke, Saran
 Landrum, Leslie G.
 Levernier, James E.
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 Magness, C. R.
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 Martin, William C.
 Mashburn, James D.
 McAlister, Joseph H.
 McAlister, Mitchell
 McBee, Sara
 McDonald, James E. II
 McElroy, Kellye
 McEvoy, Francis
 McGhee, Linda M.
 McGowan, William
 McNair, William R.
 Miller, Charles H.
 Miller, George
 Mills, William C. III
 Mitchell, Banford R. Jr.
 Moon, Steven L.
 Moore, Arthur F.
 Moore, James F.
 Morse, Michael
 Murry, J. Warren
 Nettleship, Mae B.
 Nowlin, William B.
 Ortego, Terry J.
 Owens, Sherry L.
 Pang, Robert
 Park, John P.
 Parker, Joe C. #
 Parker, Lee B. Jr.
 Patrick, James K.
 Pesnell, Larkus H.
 Pickett, James D.
 Pickhardt, Mark G.
 Pope, Kevin L.
 Power, John R.
 Proffitt, Danny L.
 Raben, Cyril
 Raben, Susan
 Riddick, Earl B. Jr.
 Riner, Dan M.
 Rogers, David L.
 Romine, James C.
 Rosenzweig, Kenneth
 Ross, Joseph
 Rouse, Joe P.
 Runnels, Vincent B.
 Saitta, Michael R.
 Sandefur, Barbara A.
 Schemel, Lawrence J.
 Schmidt, Clinton C.
 Sexton, Giles A.
 Sexton, Jon A.
 Shaddox, T. Stephen
 Sharp, Jim D.
 Siegel, Lawrence H.
 Simmons, Thomas
 Simpson, Todd R.
 Singleton, E. Mitchell
 Sisco, Charles P.
 Smith, Austin C.
 Snyder, Norman I.
 Stagg, Stephen W.
 Strebeck, Sarah Lois
 Taylor, Robert G.
 Thomas, Joanna M.
 Thorn, Garland M. Jr.
 Titus, Janet L.
 Tomlinson, Robert J. Jr.
 Turner, Sam
 Tuttle, Larry D.
 Ubben, Kenneth
 Ureckis, David
 Ward, H. Wendell
 Weed, Wendell W.
 Weiss, John B.
 Wheat, Ed Jr.
 Whiteley, Andre
 Whiting, Tom D.
 Whitney, Richard N.
 Wilson, Robert B. Jr.
 Wood, Jack A.
 Wood, Russell Hunter
 Wood, Stephen T.
- White County**
- Asmar, Salomon
 Baker, Ronald L.
 Bell, John
 Blakely, Brent M.
 Blickenstaff, Kyle R.
 Blue, Glen T.
 Blue, Leon R.
 Brown, Arnold R.
 Brown, Peggy J.
 Brown, Terry Mac
 Burns, Jerry
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 Collier, Steven F.
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 Formby, Thomas A.
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 Hatfield, David L.
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 Jackson, Clarence W.
 Johnson, David M.
 Joseph, Eugene A.
 Justus, Michael G.
 Killough, Larry R.
 Kinley, J. Garrett
 Koch, Clarence W. Jr.
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 Lewing, Hugh S.
 Lowery, Benjamin R.
 Lowery, Robert D.
 Maguire, Frank C. Jr.
 McAdams, Edward L.
 McCoy, James R.
- Meacham, Kenneth R.**
Millstein, David
Moore, Donald
Nevins, William H.
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Ramirez, Raul
Ransom, Clarence E. Jr.
Rasberry, Ronnie D.
Rodgers, Porter R. Jr.
Schwartz, Stanley S.
Shultz, Sam L.
Simpson, James A.
Smith, Bernard C.
Smith, Bob W.
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Stinnett, J. L.
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Taylor, David H.
Thompson, Bruce
Weathers, Larry W.
White, William D.
White, William M.
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Yates, Terrence
- Woodruff County**
- Hendrixson, Basil E.
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- Yell County**
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 Green, Terry G.
 Hejna, Thomas
 Hodges, Jerry F.
 Isely, William A. Jr.
 Luker, Jerome H.
 Martin, Damon G. H.
 Maupin, James L.
 Pennington, James O.
 Ring, Gene D.
 Russell, Gary W.
 Tippin, Philip
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 Agee, Kimberly R.
 Ahmed, Sahibzada
 Akkad, Nabil
 Allard, Mark
 Anderson, J. Roland
 Anderson, Roger Wilbert
 Andrews, Nancy R.
 Angtuaco, Edgardo
 Angtuaco, Edward E.

Angtuaco, Sylvia	Dickinson, Rodger C. Jr.	Harrell, James Jr.	Lehmann, Lance J.
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Ashabanner, Wesley J.	Dinulescu, Stefan Dan	Hatch, Allan B.	Lipsmeyer, Eleanor
Asi, Wael	Dobbs, John C.	Hayes, John	Little, J. Aaron
Atkinson, Evangelina	Donovan, William	Heim, Stephen	Lockhart, William G. #
Bailey, Christopher A.	Doshi, Sangeeta H.	Henry, W. Bradley	Lorenzo, Edilberto B.
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Barone, Gary	Dunigan, Rodger	Herrold, Jeffrey W.	Lyle, Robert
Barrow, Robert	Duplantis, Kathryn	Hicks, Charles E.	Lynch, Paula
Bearden, Jeffrey C.	Economides, Nicholas	Hill, H. Randy	Ma, Frank
Beck, William A.	Edattukaren, Varghese	Hill, Joy	Maes, LouAnn
Beebe, William E.	Edrington, David C.	Hill, Shirlene B.	Malik, Jacek Marian
Bennett, Anita	Edwards, Peter M.	Hilman, Michael G.	Marshall, Byrne R.
Benson, Eric Hamilton	Edwards, Todd D.	Himmelstein, Stevan I.	Marshall, Glenn E.
Beverly, Carolyn	El-Hayeck, Maroun	Holloway, David Jr.	Martin, Joan B.
Blackstock, Terri	Eskandar, Ziad	Hopkins, Robert Jr.	Marvin, Michael
Blankenship, D. Michael	Evans, Clifford L.	Hughes, Alan W.	Mawulawde, Kwabena
Bosch, Charles	Eyre, Byron L.	Hughes, Juan	Mayo, Russell
Brannon, Dabney	Ezell, Gerry D.	Hughes, Laurie O.	Mazursky, Jon E.
Brodsky, Michael	Feild, Charles R.	Hurley, James M.	McGraham, Bethany Ann
Brooks, Andrew	Ferrer, Thomas J.	Hutchison, George R.	McGrath, A. Joseph Jr.
Brown, Richard E. Jr.	Finkbeiner, Alex E.	Huynh, Chanh V.	McGuire, Samuel A. III
Bryles, Robert S. #	Fiser, Debra H.	Ibrahim, Manar S.A.	McKenzie, James
Bumpers, Paul Jr.	Fitzgerald, Amy	Ibsen, Michelle J.	McMicheal, Wanda V.
Bushman, Gerald A.	Flamik, Darren E.	Ismail, Hassan M.	Meador, A. Sharon
Calicott, Timothy	Flanagan, William H.	Istanbulli, Wajih	Meadors, Carol
Campbell, Charles E. Jr.	Flanigin, Richard	Itzig, Charles B. Jr.	Meredith, Paul D.
Campbell, James Jr.	Florendo, Noel	Jabbour, J. T.	Miller, Laurence H.
Carey, Martin John	Fontenot, H. Jerrel	Jackson, Richard J.	Miller, Michael
Carey, Victor Jr.	Ford, Barry G.	Jaffar, Muhammed	Minnich, Thomas E.
Carrick, Gareth	Foreman, Riley D.	Jasin, Hugo	Moore, Jesse
Carrico, John D.	Fuerst, Erwin J.	Johnsrude, Christopher L.	Moore, Jim J. II
Carroll, Barry	Ganelli, Ronald R.	Jones, Robert E.	Moore, Steven M.
Carter, Inge Renate	Garcia-Rill, Susan	Kale, Robert	Morgan, Martha
Cherny, W. Bruce	Ghan, Sheryl E.	Karassi, Malek S.	Moutos, Dean M.
Chitwood, G. Glen	Gilbert, Jimmy	Katz, Stephen J.	Mullens, Mark
Chu, Tommy D.	Glenn, Robert Edward	Keeter, L. Phil	Munshi, Medha N.
Clary, Cathy	Gober, Gregg	Kefri, Maher K.	Murillo-Lopez, Fernando H.
Claycomb, Scott C.	Goodman, Jack	Kelly, James E. III	Murray-Stephens, Andrea J.
Cofer, Thomas	Gordon, Alfred Y. Jr.	Kendrick, Carl M.	Murry, William L.
Coffman, John L.	Graham, Charles J.	Keplinger, Florian	Napolitano, Charles A.
Collins, Gary James	Grasse, John Jr.	Kerns, Kelly	Nelson-Adesokan, Paula M.
Collins, Harold B. II	Gregory, Jo Anne	Khan, Mohammed B.	Nichol, Brian
Cook, Joseph A.	Grisham, Dannetta	King, William R.	Nichols, Scott
Cook, Stephen	Gubin, Steven S.	Kinney, Joyce	Nix, John E.
Coombe-Moore, Jackie	Guevara, John	Kirchner, Jeffrey	Norton, J.B. Jr.
Cooper, Scott	Gustavus, John L.	Knowles, Glen C.	O'Sullivan, Patrick J.
Craytor, Bret F.	Haas, David C.	Krisht, Ali F.	Osofisan, Olaniyi
Crow, Ronald M.	Handley, David L.	Lamb, Johnny Mack	Pace, Rose A.
Curtis, Mary A.	Haney, R. Kevin	Lang, Patricia A.	Paine, Johnny R.
David, Wendy S.	Hardin, A. Scott	Lange, John L.	Papageorge, Dean
Davis, Thomas J.	Hardy, Kyle G.	Lansford, Bryan	Parham, David M.
DeLoach, John Jr.	Harik, Sami I.	Lawson, William B.	Parham, Groesbeck P.
Devabhaktuni, Venu G.	Harper, Richard	LeBoeuf, Dorothy	Parker, A. Wade

Paslidis, Nick J.	Thompson, Jerome W.	Bailey, Don M.	Danner, Christopher
Pastor, Randy	Torres, Adalberto Jr.	Baker, Karen	Darby, Scott J.
Paul, William L.	Travis, Patrick	Bakhtawar, Iram	Davis, Marc J.
Pearson, Fran	Trussell, Anne	Baldwin, Shelly	DeFreese, Travis
Pilkington, Cheryl E.	Turner, Jan L.	Balis, Luc G.	Delap, Susan
Pilkington, Neylon S.	Tutton, James	Baltz, Katherine	Devabhaktuni, Nalini
Ploetz, Carina	Utley, Phillip M.	Barrett, Rebecca	Diamond, Corey
Plunk, Hermie G.	Van Der Velden, Elaine M.	Bauknight, Nichole	Diamond, Kevin
Pohle, Floyd	Van Hemert, Rudy	Bayer-Garner, Ilene Bertha	Dibrell, Fredrick
Powers, Robert	Van Noy, Joanna W.	Bean, Paul E.	Dickson, Brian G.
Purnell, Gary L.	Vasudevan, Padmini	Beeman, David	Dicus, G. Scott
Quinn, Brian D.	Velusamy, Muthusamy	Behrens, Bing X.	Dietz, Tracy
Rader, George	Vermont, Charles	Berry, Michael F.	Diles, Timothy R.
Reddy, Krishna	Vogel, Eric D.	Bevans, David III	Dillaha, Jennifer
Reid, Graham M.	Vorhease, James W.	Bhutta, Adnan T.	Domon, Steven E.
Reis, Ivory	Wade, Walter Burke	Bigham, Lee IV	Driskill, Angela
Robinson, Nancy	Waheed, Atiya N.	Bimle, Cynthia	Duffield, Robin P.
Rodkin, Richard S.	Waldron, James A. Jr.	Bivens, Marilyn	Dugger, Joseph S.
Romero, Alfred T.	Washington, Mitzi A.	Blackwood, J'Ann B.	Duke, John Richard
Rozas, David	Waterhouse, Michael H.	Bonwick, Janina R.	Dunn, James R.
Rucker, Gari	Waters, Samuel	Boren, Edwin L.	Eads, Lou Ann
Russo, William Louis	Webb, Malinda	Bowen, Bryan D.	Ebsen, Tammy
Salmeron, Manuel	Wendel, Paul J.	Brady, John G.	Ehret, Rose
Sanchez, Ilsa	West, Joseph	Brandt, John O.	Elliott, Jana
Sangster, Michael	Westwood, John Jr.	Brashears, Clay	Elnabtity, Mohamed
Sarinoglu, Cem	Wheeler, Richard	Brewer, Jonathan K.	Emery, Robert
Schaefer, George	Whitaker, John	Brown, Robert D.	Endsley, Charolette
Schexnayder, Stephen M.	White, Paul C. Jr.	Bruffett, Wayne	Erwin, John
Schmidt, David	Willis, Charlotte	Burke, Charles	Erwin, Steven
Seib, Paul M.	Wood, Michael D.	Burks, Karen	Esquibel, Ramona D.
Sharma, Ranbir Kumar	Woodson, Alexa	Burr, William E. Jr.	Eyre, Marion D.
Sheikha, Mouhammed K.	Wormuth, Christopher J.	Burton, Todd	Fahr, Michael
Shewmake, Kristopher B.	Wylie, Paul	Cain, Stephen R.	Fant, Jerri S.
Shock, Melessa	Yawn, Timothy	Caldwell, Charles R.	Farajallah, Awny
Siegel, David S.	Yoser, Seth L.	Cameron, Ricky L.	Farooque, Mustafa
Sites, Terry Jay	Young, Michael C.	Carino, Richard	Farst, Karen J.
Slezak, James	Yuen, James C.	Carr, Russell S.	Ferguson, Susan Portis
Smith, Kirby L.	Zangari, Maurizio	Cash, David	Fischer, Michael
Smith, Samuel D.	Zini, James E.	Cash, Paige P.	Fiser, Richard
Snow, Sandra L.	de Saint Felix, Douglas	Ceola, Ashley	Fletcher, James W. III
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Speed, Darrell		Cerrato, Deborah	Fogata, Maria Luisa C.
Spence, Don K.		Cisneros, Teresa C.	Fortin, Elise
Spiers, Jon P.		Clark, Teresa	Frankowski, Gary
St. John, Melody		Colvin, G.B. 'Kip' IV	Franks, Hayden
Stair, J. Michael		Connelley, Jay	Froman, Elizabeth A.
Starnes, C. Wayne		Cooper, Keith	Gannon, Patrick R.
Stern, Thomas N.		Coppola, Angelo Jr.	Garner, Kimberly
Steward, Rodney Jr.		Corbell, Mark E.	Garrett, George C. Jr.
Sturner, William Q.		Cottone, Joseph	Gati, Kenneth G.
Suasin, Winlove B.		Coutts, William II	Glasco, Gerry B.
Tait, Layne		Crafton, Eugene M.	Goodson, Timothy C.
Talley, J. David		Cruz, Lisa R.	Gordon, Anthony
Tanner, Paul R.		Dale-Stewart, Casey	Gordon, Gayle
Teal, Linda		Dalton, Cara	Govindarajan,
Teo, Charles		Daniel, George K.	

Residents

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Adler, Ira	Cooper, Keith
Albin, Amy Wilson	Coppola, Angelo Jr.
Alderink, Carlisle	Corbell, Mark E.
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Alley, Jerri	Coutts, William II
Andrews, Sean	Crafton, Eugene M.
Ansari, Mohsin K.	Cruz, Lisa R.
Arick, Carmen L.	Dale-Stewart, Casey
Avva, Ramesh	Dalton, Cara
Baho, Najla J.	Daniel, George K.

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Graham, Richard	Johnson, Brad D.	Mitchell, Bruce	Sanders, Scott
Grant, Jerry	Johnson, Jennifer	Mitchell, Rhonda K.	Sandor, Zsolt F.
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Green, Cheryl	Jussa, Murad M.	Moffett, Shirolyn R.	Shaver, Mary
Gregory, J. Minor	Kassel, Gregory P.	Mohan, Kumaran K.	Shaver, Robert
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Guevara, Doyle P.	Kidd, Tracy L.	Moore, Glennal M.	Shutt, Bryce C.
Gutierrez, Miguel	Kile, Herman L. Jr.	Moser, Karl D.	Siems, Martin
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Hale, Arthur E.	Kirchner, JoAnn	Mullins, Michael	Singh, Baldev
Halter, Charles	Kirkland, Allan K.	Muwalla, Firas R.	Singh, Malwinder
Hamby, Jeffrey	Kiser, Thomas	Neal, Marianne R.	Slack, Tobin A.
Handloser, Holly H.	Knight, Michael	Netterville, J. Kevin	Slay, David
Hardin, Christopher	Knutson, David L. II	Newman, Alan W.	Smith, Daniel F.
Harrigan, Christopher	Kohli, Manish	Nguyen, Larry	Smith, Matthew W.
Hart, Susan K.	Kosuri, RamaKrishna	Nighorn, Laura H.	Soderberg, Keith C.
Hartman, Arthur R.	Lancaster, Shawn	North, Michael	South, Ronald
Harvey, Jerry L.	Laughlin, Catherine L.	Nutt, Angela	Sparling, Ed
Hassan, Hassan A.	Leachman, Michael R.	Over, Darrell R.	St. Pierre, Mark
Hatcher, Alexander H.	Ledbetter, Johnny Jr.	Palmer, Kristine G.	Steely, Donald
Hatcher, Stacey L.	Lewandowski, Raymond C. III	Parcon, Paul J.	Stellplug, Bradley S.
Hatfield, Patrick M.	Liu, George	Paredes, Mark F.	Stewart, Candace
Hatley, Russell	Lorio, Allison G.	Perkins, Lalita	Stewart, Casey D.
Hatley, Tina W.	Lorio, Jerry J.	Perkins, Richard	Stewart, Jason G.
Hays, David A.	Loughman, Lisa	Phillips, John D.	Stewart, R. Todd
Helsel, Jay C.	Lowery, Lisa	Phillips, Rebecca	Stocks, Rose Mary
Hendrix, Barry	Lowther, Laura Marie	Phillips, Tracy T.	Stone, Ilya
Hendrix, Lisa	Lu, Eugene	Phomakay, Von	Storey, Mark R.
Henry, Mary J.	Lucas, Shauna L.	Pierce, Scott	Stout, Paul
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January 1997

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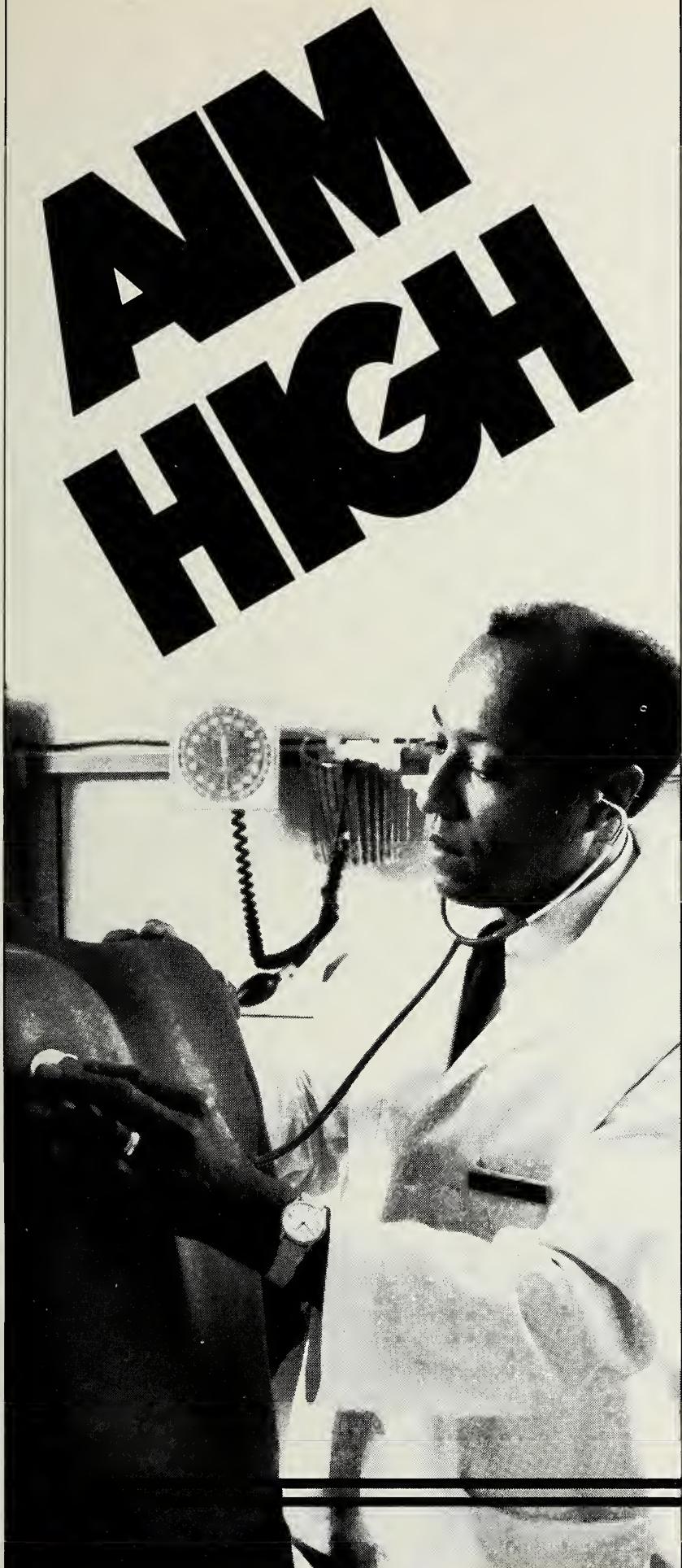
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Physician Practice Evaluations - Do the Exams Never Stop?

Jerry Byrum, M.D.*

I would like to relate two experiences in the realm of practice evaluation that I've had this year that have caused me to reflect on the profession of medicine. A professor once said, that even though one finished school, the process of examination of one's performance would never stop. I have come to believe him.

The first experience is that of re-certification of my pediatric board exam. Mine was one of the first classes of residents who after successfully completing the board exam of the American Board of Pediatrics were issued a time-limited certificate of 7 years. All previous successful board candidates had been issued a lifetime certificate which is still in effect. This policy change did not seem fair to me, particularly in the light of the \$1,055 price tag of the repeat exams and the inordinate amount of time needed to study for and then take the test. If one just placed a value of \$100 per hour on the forty plus hours it takes to complete the exam and added the fee for the exam, the cost is in excess of \$5,000 every seven years not to mention study time. I must admit that at the time I took the initial exam in 1989, I had no intention of repeating the process. However, over the ensuing years, I noticed that hospitals, insurance companies and even my patients were quite interested if I was "board certified." My anger at this process of re-certification grew over these years until finally, it was time to take the exam this year (1996).

The exam for pediatric board re-certification is administered by computer at home in an open book fashion on the honor system. The components of the exam are knowledge, diagnosis and management questions which are given in separate tests. A passing score on each of the three components yields re-certification.

I was not the only pediatrician upset about taking this test. There were many letters and editorials written about this process over the years. I intentionally waited as long as possible to take the test before my certification lapsed because I felt that there had to be problems with the new methodology of administering the test. There were in fact these problems. Because of the tremendous time involved, the number of test questions was shortened after several doctors complained about its length. The records review part of the test was deleted.

I decided to pose this question to many of my closest patients. "Do you care if your doctor is board certified?" I asked my patients to please not confuse the issue of continuing medical education with re-certification. I am a believer in keeping up with new developments in the field and told them so. This was an issue of testing my competence to practice medicine with test questions on a computer. Was this a valid measurement of my competency? I was a bit surprised to find out that not only did my patients care about this certification, but they felt it was a measurable sign of quality care and was in fact, expected of me. After I heard this same response multiple times, I sent in my application with \$1,055.

What happened next was a surprise. On the initial test in board certification in 1989, there had been a lot of questions on the test which I would describe as "meaningless minutia" which had little bearing in my opinion on the practice of general pediatrics. At that time however, I had expected that kind of test and had prepared over the three years of residency for it. I knew every syndrome, metabolic pathway, anatomic subtlety and rare disease that my mind could hold in temporary storage. I passed.

In pediatric practice however, minutia is de-emphasized and common things are emphasized. One of my favorite sayings is "common things occur commonly." Not that doctors in practice don't know rare diseases or rare facts, many do. But for me to remember minute details of non-clinical information, would be impossible without intensive study which I was reluctant to do. I had long since forgotten how many nanometers there are in striated muscle periodicity. This kind of information wasn't going to benefit my patients. Also in practice, patients present with complaints and symptoms, not diagnoses. It takes a good doctor to take complaints and symptoms and arrive at a diagnosis. How was the American Board of Pediatrics going to check that?

Instead of studying for the test, I just took it, cold. To my genuine surprise, the test was actually a pleasure to take. I found myself saying over and over again, "I have been here." The questions were clinical in nature and dealt with knowledge, management and diagnosis of the pediatric problems which I deal with every day. Rare diseases were mentioned on the test, but not in a way that was unlike what we see in practice. In fact, the Board even did a good job of present-

* Dr. Byrum is a Pediatrician with the All For Kids Pediatric Clinic in Little Rock. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

ing signs and symptoms and having the doctor arrive at a diagnosis. I felt it was a good exercise.

Don't get me wrong, it still took an equivalent of one week of work to complete the test. The cost was still \$1,055, a lot of money. But the process was a positive one in that I felt good about the job I'm doing for my patients. After the test, I even placed the term "Fellow, American Academy of Pediatrics, re-certified 1996" on my business card. Hey, you need to get something for all this trouble. So, hurdle number one of the 1996 evaluations was behind me, even though I was a bit tired, poorer financially, and had 40 hours of effort into the process. Please keep in mind that no continuing education credit was gained for this investment of money and time. That will require 40 to 60 more hours and \$2,000 more dollars.

The next evaluation of my professional practice that I want to discuss began this fall when a local HMO implemented an economic credentialing program. The program tied reimbursement rates and even participation in the plan to what they called "Quality Index Summary." As it turns out, the Quality Index Summary, or QIS score for short, is a compilation of computer scores for various economic trends in one's practice. These trends are determined by analyzing claims data for the members of the plan which the physician has generated. There are multiple computer programs which generate this data. Data on cost is presented in several formats, such as average cost per patient, actual cost per patient, cost per claim, and claims per patient. The various programs analyze the data just a little differently. Drug utilization data is presented such as cost per member and number of prescriptions per member. The most frequent prescriptions written with their corresponding cost is presented. Comments are made to the appropriateness of the use of these drugs without chart review. Hospitalization rates with length of stay are presented. Of most importance is a presentation of adjusted cost per member per month. Current Procedural Terminology coding and International Classification of Diseases coding mismatches are presented. An example of this is CPT code number 92567, tympanometry with the ICD9 code 477.9, allergic rhinitis. The code for allergic rhinitis in their view does not support the tympanometry procedural code. In addition, chart review data with comments on the appropriateness of diagnosis along with comments on the legibility of the record is presented.

All this information is weighted, then evaluated for each physician and finally summed up to yield an efficiency quotient, the QIS score. This quotient is then used to calculate the rate of reimbursement as a percentage of usual customary charges and whether or not you will be allowed to continue to participate in the plan. Because this process involves large numbers of patients, diagnoses, codes, dollars spent, with resulting statistics, and computer analyses, it is a complex and time-consuming task to understand. Meetings to discuss the findings are made. More meetings

to challenge the results are made. Corrections in data errors and methodology are made. Hours of time are consumed. Physician committees are recommended to help the system become more accurate. More uncompensated time is required in evaluating my practice.

Because a significant proportion of my patients are covered in this plan, it is quite important that I be successful in retaining these patients. Therefore, I cooperate. But like the re-certification process, this evaluation is intrusive, time-consuming and cumbersome.

After going through the two evaluations described above this year, I then began to think about all the other evaluations that take place regarding my practice. There are several others that I can mention. Of course of utmost importance is that of my patients who place their trust in me every day. Their very presence in my practice is the result of their evaluation of me and to some extent the evaluations of others that they hear. These evaluations are shared with other people in the community and this combined body of evaluations forms something called a "reputation." To be successful, a doctor needs a good reputation.

Then there are the evaluations of the peers in my practice, those three doctors whom I highly regard and with whom I am honored to practice medicine on a daily basis. This close working relationship was brought about and continues because of evaluation of our individual practices.

Next are the evaluations of peers outside the practice. This takes the form of referrals, professional relationships, committees, fellowships, societies and so on. Then there are the hospital organizations where I practice, with their attendant evaluations of competence, credentials, record keeping, drug utilization, length of stay, cost, COBRA compliance, care path compliance and so on. There is the Foundation of Medical Care (Medicaid) whose evaluations of management frequently deny payments. Let us not forget OSHA and CLIA evaluations. There are Medicare Peer Review Organizations, the State Medical Board, at times plaintiffs attorneys, and last but certainly not least, other insurance companies. The list goes on and on. I'm sure I've omitted several other forms of evaluation that we face.

It seems to me that today's doctor is in the middle of an economic and political crossfire of various groups whose goals are very different and self-serving. I've learned first hand this year that like it or not, evaluations of my performance are a part of medicine today. Unlike our predecessors who made their own rules, other parties outside our control are requiring evaluations that directly affect our ability to practice medicine, our autonomy, our income and that spend our precious free time on an uncompensated basis.

I wish I had a great paragraph to end this editorial with, something to say that could be done to ease the burden of evaluations that we face as doctors. But I don't have a great paragraph to type here. All I can say is that I'm just tired and a little bit angry.

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Medicine in the News

Health Care Access Foundation

As of December 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 11,954 medically indigent persons, received 22,592 applications and enrolled 43,927 persons. This program has 1,757 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

January Declared National Volunteer Blood Donor Month

The American Association of Blood Banks, American's Blood Centers and the American Red Cross recently announced that President Bill Clinton has proclaimed January 1997 as National Volunteer Blood Donor Month to honor past and present blood donors and encourage new donors.

Here are some interesting facts:

Every three seconds, someone needs blood. Every minute, patients use more than 36 units of blood or blood products. Every day, approximately 40,000 units of blood are used throughout the country.

About 14 million units (including approximately one million autologous donations) of blood are donated each year by approximately eight million volunteer blood donors. These units are transfused to as many as four million patients per year. A unit of whole blood is roughly equivalent to a pint. Adult males have about 12 pints of blood in their circulatory systems, and adult females have approximately nine pints. Each unit is usually separated into multiple components, which may be transfused to a number of different individuals. Up to four components can be derived from one unit of blood.

On any given day, approximately 40,000 units of red blood cells are needed. More than 23 million units of blood components are transfused every year.

Less than 5 percent of healthy Americans eligible to donate blood actually donate each year. According to studies, the average donor is a college-educated white male, between the ages of 30 and 50, who is married and has an above-average income. However, these statistics are changing, and women and minority groups are volunteering to donate in increasing numbers. While persons 65 years and older compose 13 percent of the population, they use 25 percent of all blood units transfused. Using current screening and donation procedures, a growing number of blood banks have found blood donation by the elderly to be safe and practical.

The approximate distribution of blood types in the U.S. population is as follows. Distribution may be different for specific racial and ethnic groups:

O	Rh-positive	38 percent
O	Rh-negative	7 percent
A	Rh-positive	34 percent
A	Rh-negative	6 percent
B	Rh-positive	9 percent
B	Rh-negative	2 percent
AB	Rh-positive	3 percent
AB	Rh-negative	1 percent

Booklet Available on Chronic Fatigue Syndrome (CFS)

The National Institute of Allergy and Infectious Diseases (NIAID) has revised its popular booklet developed to inform the medical community about chronic fatigue syndrome (CFS). *Chronic Fatigue Syndrome: Information for Physicians* can assist physicians and other health professionals in developing a supportive program of patient management that dispels myths about CFS and its treatment, offers reassurance, and helps patients and their families adjust to living with this chronic illness. Free copies can be obtained by writing to: CFS Booklet, NIAID Office of Communications (31/7A50), 31 Center Drive, MSC 2520, Bethesda, Maryland, 20892-2520. To order or download the publication on-line, visit NIAID's home page at <http://www.niaid.nih.gov>.

AMA's Superhero Joins Battle Against Tobacco - Nation's Doctors Will Help Kids Smoke Out the Tobacco Menagerie

"Look out camels, cowboys and penguins. Your days of enticing kids to take up tobacco are coming to an end," said Randolph D. Smoak, Jr., M.D., member of the AMA Board of Trustees. That certainly is the plan of the AMA which in November launched its new cartoon superhero, "The Extinguisher," and his mentor and creator, "Doctor Nola Know," two new champions for America's kids in the fight against tobacco. Their mission is to educate and protect children from the dangers of smoking. Together, they will help kids wage their own "kid crusades" to "smoke out" and "extinguish" the cigarette industry's advertising and marketing campaigns toward America's youth.

The super duo will be featured in a new AMA nationwide public health campaign aimed at teaching elementary school-age children about the dangers of

smoking and nicotine addiction. Over the next year, the AMA's Extinguisher and Dr. Know will appear at anti-smoking events sponsored by kids, schools, and anti-tobacco organizations.

The AMA will also be working with *Scholastic News* to create anti-smoking educational materials featuring the Extinguisher and Dr. Know for use in classrooms across the country. *Scholastic News* is a current events magazine for elementary school students distributed to approximately four million children in 150,000 American classrooms. Kicking off the educational partnership between the AMA and *Scholastic News* will be a "Tobacco-Free Pledge Contest," in which kids will write and sign a "tobacco-free pledge," explaining how they plan to help in the fight against smoking and keep their friends, schools and communities tobacco-free.

According to the cartoon narrative, the Extinguisher wasn't always a superhero. A short time ago, he was a young man on the brink of death. His diseased lungs had been so weakened by tobacco that desperate measures were needed to save him. A smart, savvy physician, Dr. Know, not only brought him back to life, but turned him into a scientific wonder with artificial lungs and "super powers," including increased brain power and special heat-seeking devices able to detect cigarettes from miles away. "I wanted to make sure the Extinguisher was able to kick butts wherever he finds them," Dr. Know said explaining her creation.

A study published in JAMA in 1991 showed that children as young as six years old were as familiar with "Old Joe Camel" as they were with Mickey Mouse, and that such familiarity is a known risk factor for smoking and tobacco addiction. "We know that every day in the United States 3,000 young people begin to smoke – that's more than a million new smokers each year," said Dr. Smoak. "Each day our children are replacing the smokers who die prematurely from tobacco-related diseases, the number one preventable cause of death in the United States. This is a terrible travesty that must end," vowed Dr. Smoak.

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: November 6, 1996

- *Ginger Kay Allen Davenport, RN #29756 (Ft. Smith) Probation Non-Compliance; Probation extended through 11/97
- *Judee Anne Long, RN #31757 (Fayetteville) Voluntary Surrender
- *William Hamilton, RN #29792 (Benton) Consent Agreement; Probation - 2 years; Civil Penalty - \$500
- *Matthew Douglas Wallace, RN #44869 (Hot Springs) Suspended - 5 years; Civil Penalty - \$4,400

DISCIPLINARY: November 7, 1996

- *James William Hall, RN #30366 (Cabot) Probation - 2 years; Civil Penalty - \$250
- *Jackqueline Rennae Bryant Gschwend, RN #24957 (Marvell) Allowed to renew RN license; Suspended - 2 years; Civil Penalty - \$500
- *Patricia Lynn Bright Walker, LPN #24615 (Glenwood) Allowed to renew LPN license; Suspended - 2 years; Civil Penalty - \$1,100
- *Rebecca Jill Gramling Wells, RN #33205 (Paragould) Suspended - 5 years
- *Cynthia Michelle Smith Konert, RN #29297 (Van Buren) Probation non-compliance; probation extended through 11/97; Civil Penalty - \$250
- *Sharon Ann Morris, RN #11056 (Springdale) Reinstated RN license with 1 year probation
- *Barbara Lynn Coleman Cash, RN #24941 (Fayetteville) Reinstated RN license with 1 year probation

LETTER OF REPRIMAND:

- *Brenda Kay Willis Wisener, RN 44870 (Warren) 10/11/96
- *Kathleen Lavonne Barlow Westman, RN 26007 (Hot Springs) 10/11/96
- *Beverly Kay Toddy McClung, LPN 32824 (Rector) 10/14/96
- *Carol Elaine Gilley, LPN 13992 (Morrilton) 10/15/96
- *Connie Marie Lummus, LPN 31711 (Texarkana) 10/15/96
- *Tina Lynn Webb Hood, LPN 30082 (Malvern) 10/11/96
- *Diana Lynn Garner Jarrett, LPN 26490 (Everton) 10/11/96
- *Troy Robinson, LPN 31421 (Hot Springs) 10/14/96
- *Darren Scott Smith, LPN 31453 (St. Joe) 10/15/96
- *Tonya M. Long, RN 44346 (Wheatley) 10/15/96
- *Mary Sue Pate Clemons, RN 44152 (Sparkman) 10/11/96
- *Beverly Knight, RN 21778, RNP 973 (Little Rock) 10/14/96
- *Darlene Love O'KeKe, LPN 30206 (Little Rock) 10/15/96
- *Sharon Kaye Meeks Mays, LPN 27997 (Pine Bluff) 10/15/96
- *Timothy Dean McAfee, LPN 32351 (Caraway) 10/30/96

OFF PROBATION:

- *Kimberly Ann Green, RN 30356 (Rogers) 9/17/96
- *Lisa Woodward Jones, LPN 23255 (Greenbrier) 10/29/96
- *Mary Della Roark Freeman, LPTN 768 (Sparkman) 10/9/96
- *Chris Larimer, LPN 28980 (Ft. Smith) 10/7/96
- *Virginia June (Gaither) Howard, RN 40617 (Nash, TX) 10/9/96

REINSTATEMENT:

- *Michael Day Aylett, RN 37777/LPN 20942 (Nashville) 9/23/96 (Probation to continue through 5/97)
- *Carolyn Jean Harding Sebby, RN 30585 (Bull Shoals) 11/7/96

ALERT:

If you have employed the following nurses or have any knowledge of their whereabouts, please notify the Board of Nursing at (501) 686-2700.

- *Donna Kay DeVore, RN 31613
- *Debra Bussiere, RN 51249
- *Leslie Beth Hohimer George, RN 51696
- *David Rowland, RN 49165

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CORRECTION NOTICE:

In the November 1996 issue of *The Journal of the Arkansas Medical Society*, on page 299, in the New Member section, under Little Rock, the name of Doctor Charles Robert Feild was spelled incorrectly. The correct spelling is as it appears here. *The Journal* regrets this error.

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AMS Newsmakers

Dr. William D. White recently received a certificate from the American College of Cardiology in recognition of meeting or exceeding a skill level considered adequate for independent interpretation of the wide range of electrocardiographic patterns encountered in hospitals and outpatient medical practice.

Dr. M.M. Zufari, a vascular and general surgeon in Fort Smith, attended the annual conference on Advanced Interventional Techniques for Peripheral Vascular Disease in Chicago, Illinois, in September. Led by world renown physicians, Dr. Zufari participated with other attendees in live patient demonstrations, observing techniques of managing disorders such as blood clots, renal artery stenosis and acute stroke.

With nearly 5,000 other family physicians from across the country, **Drs. Edward A. Gresham and Benjamin L. Walsh**, both of Crossett, attended the American Academy of Family Physicians' Annual Scientific Assembly in New Orleans, Louisiana, in October.

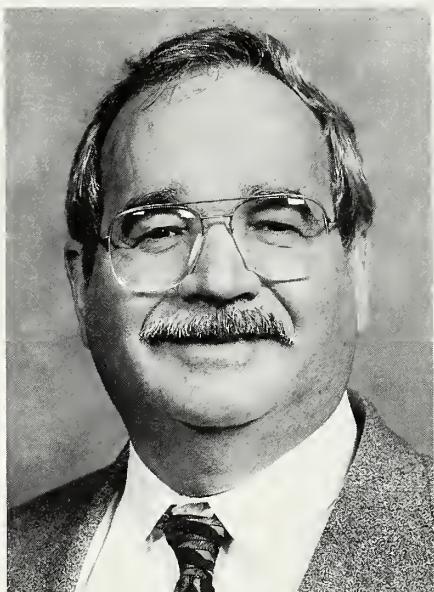
Drs. Darrell Speed, a radiology oncologist; **Doug Kerin**, radiologist; **Stan Teeter**, primary care physician; and **Mike Bell**, surgeon, all of Russellville, were among other panelists for a question-and-answer forum during a breast cancer seminar at Saint Mary's Regional Medical Center in October. About 100 women attended the seminar.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for October 1996 are: **Olaniyi Osofisan**, of Van Buren, and **Dallie Ricca**, of Jonesboro.

Send your accomplishments and photo for consideration in *AMS Newsmakers* to:

Arkansas Medical Society
Journal Editor
PO Box 55088
Little Rock, AR 72215-5088

Welcome Back Dr. Roman



We are proud to announce that Dr. Juan J. Roman has returned to UAMS Medical Center as a Gynecologic Oncologist and professor. From 1970-1976, Dr. Roman was on the faculty at UAMS. During the last 20 years he has been in private practice and has served in various leadership roles at St. Vincent Infirmary Medical Center including chief of gynecology.

UAMS Medical Center is the state's only member of the Gynecologic Oncology Group, a National Cancer Institute-funded cooperative program that arranges clinical trials for new treatments for women with gynecologic cancers. With the addition of Dr. Roman, UAMS Medical Center now has three of the four gynecologic oncologists in the state on its staff. To refer patients to Dr. Roman or to one of his colleagues, please call 686-8000 or 1-800-942-UAMS.



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Here's Our Agenda

It's simple. It's straightforward. And it represents the future of medicine. The American Medical Association presented to the Republican and Democratic leadership this agenda for the upcoming 105th Congress. Your AMA membership strengthens our voice in support of physicians and their patients. . . and will enhance our efforts to turn these goals into reality.

- **Patient Protections** Above all, preserve the ability of physicians to act as advocates for their individual patients. Do not allow insurers to "gag" physicians or withhold medically necessary treatments from their patients.
- **Medicare Reform** Make the Medicare program solvent. Expand patient choice of plans. Allow future growth rates that cover patients needs. Retain special protection for the vulnerable and elderly.
- **Medical Education and Research** Continue to support medical education and research so we can find cures for killers such as AIDS and cancer.
- **Public Health Problems** Expand prevention and treatment programs to combat AIDS, drug abuse, smoking and violence. These problems cost billions of dollars and millions of lives.
- **Liability Reform** Enact meaningful liability reform to ensure fair compensation to patients with legitimate claims while eliminating excessive malpractice awards that lead to defensive medicine.

**Join or renew your membership in the AMA today —
call 800 AMA-3211**

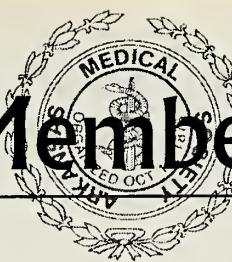
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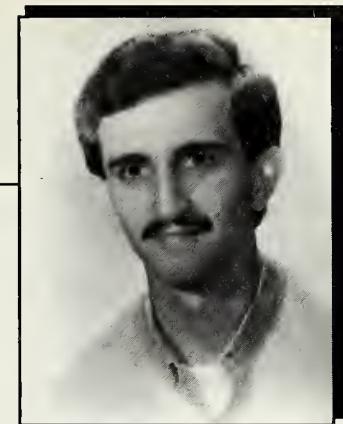


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New Member Profile



Malek S. Karassi, M.D.



PROFESSIONAL INFORMATION

Specialty: Internal Medicine - Endocrinology

Years in Practice: one

Office: Decatur

Medical School: Aleppo University, Syria, 1989, and Chicago Medical School, 1992

Residency: UAMS, 1994

Fellowship: University of California, 1995

Volunteer work: Aleppo University, Al-Razi Hospital ER, and as a medical student at Al-Watani Hospital ER and in rural areas in Syria three times a week

Honors/Awards: Graduated 11th out of a class of 14,000

PERSONAL INFORMATION

Date/Place of Birth: June 6, 1964 in Syria

Spouse: Najwa Karassi, housewife

Children: daughters, Tasneem, three years old and Bayan, four months old

Hobbies: Reading (science books), watching sports, playing ping-pong

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: a mathematician

Worst habit: Reading (it upsets my wife!)

Best habit: Reading (I enjoy it!)

Favorite junk food: Burger King Double Whopper

I most value: My wife and children

People who knew me in medical school, thought I was: caring and hard working with a strong memory

The turning point of my life was when: I was accepted into medical school on a scholarship

Favorite vacation spot: Home with family

One goal I am proud to have reached: Having a stable family

Favorite Childhood Memory: When I got my first bike

When I was a child, I wanted to grow up to be: An architectural engineer

One of my pet peeves: I don't have any

First job: Selling clothes in carnivals (in Syria)

Worst job: none

One word to sum me up: Life (I like life)

My life philosophy: Be happy, realistic and give people chances

If you would like to appear in *New Member Profile* or *Member Profile*, contact Tina Wade at AMS at (501) 224-8967 or 1-800-542-1058.

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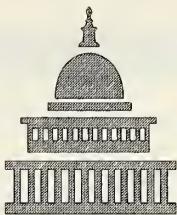
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Legislative OUTLOOK



Z. Lynn Zeno, AMS Director of Governmental Affairs

New Year Brings New Challenges

The New Year will bring new challenges as the 81st Session of the Arkansas General Assembly begins on Monday, January 13, 1997.

A plethora of health related legislation is expected as third party payors seek greater control of medicine; allied health providers attempt to expand their scopes of practice; state government tries to roll back Medicaid funding; another attempt will be made to tax tobacco; and the list goes on and on and on...

The Arkansas Medical Society House of Delegates met October 17, 1996, in Hot Springs at the annual fall meeting and took official positions on twenty-five important issues that have already been identified for debate in the upcoming legislative session. Following this article is a listing with a brief description of the proposed legislation by various classification and AMS's position.

How Can You Help?

Although medical society representation at the Capitol is a vital component to successful lobbying, the keystone to any legislative success is support from the "grassroots."

When considering various legislative proposals, lawmakers want to know the views of their constituents. They are always impressed when a physician takes the time away from their busy schedule to call upon them. No one knows more about health care than physicians!

Contacting Your Legislators

The AMS will update you on important issues throughout the legislative session via the weekly *Legislative Update* and other special bulletins. If you need additional information before contacting your legislators call the Society office and we will brief you on the status of legislation. Your visit will be more effective with complete knowledge of the issues.

Occasionally, time is of the essence and you can call your legislators at the State Capitol. Generally, there is time to contact them locally, on the weekends, in their home districts. Do not hesitate to call them at home, they expect it; it goes with the territory.

If you are in Little Rock (for the out-of-towners), you may want to visit your legislators at the State Capitol. Legislators will welcome your visit, but time may be limited with the rush of committee meetings, hearings, etc. that transpire during the session.

Stay in touch with your legislators. Let them know your interest is sincere and that they can contact you if they need more information on a medical issue. Please alert your office staff that if a Senator or Representative calls...you need to be interrupted.

A list of 1997 legislators with their addresses and phone numbers is printed in this issue of *The Journal* for your convenience. This list will also be printed on the reverse side of your weekly *Legislative Update* bulletin.

No one knows
more about
health care than
physicians.
Let your voice be
heard. The 81st
Session of the
Arkansas General
Assembly begins
on Monday,
January 13, 1997.



ISSUE

POSITION

ALLIED HEALTH CARE PROVIDERS:

Medical Assistants *Support*

A bill to define the responsibilities and authorize the use of medical assistants by physicians

Certified Registered Nurse Anesthetists *Oppose*

A bill to allow Certified Registered Nurse Anesthetists to practice independently without physician supervision

Optometrist Prescribing *Oppose*

A bill to expand optometry scope of practice to include full prescribing privileges and the use of lasers

Oral Surgeons *Oppose*

A bill expanding the dentist scope of practice to allow oral surgeons to perform facial reconstruction

Podiatrist Hospital Privileges *Oppose*

A bill to prohibit discrimination against podiatrists in regard to hospital privileges

Acupuncturist Licensing *Oppose*

A bill to establish licensure for acupuncturists

LEGAL ISSUES:

Comprehensive Tort Reform *Support*

A bill addressing a comprehensive package of legal reforms to include: joint and several liability, collateral source, product liability, limits on punitive damages, limits on contingency fees and structured settlements

Third-Party Payor Liability *Support*

A bill to place liability on insurance companies for patients injured as a result of a decision by third-party payors

Civil Immunity for Emergency/Disaster Care *Support*

A bill to provide civil immunity for lawyers and physicians who provide uncompensated care in conjunction with emergency or disaster related care

Opening of Peer Review Records *Oppose*

A bill opening up hospital or clinic peer review proceedings to discovery in medical malpractice proceedings

MANAGED CARE INSURANCE ISSUES:

Patient Protection Act II *Support*

A Comprehensive bill regarding managed care including: disclosure of financial incentives for providers not to treat; disclosure of provider selection and de-selection criteria; establishment of appeal and grievance procedures; elimination of "gag" rules in contracts; and drive through delivery standards



ISSUE

POSITION

Medical Savings Accounts *Support*

A bill authorizing and establishing state guidelines
for medical savings accounts

Workers' Compensation Reform *To be determined*

A comprehensive bill of changes in workers' comp law

Medical Records *Oppose*

A bill to standardize medical record fees at 25 cents per page

Mental Health Parity *Support*

A bill to require third-party payors to reimburse treatment of
mental health coverage on the same basis as other health care coverage

STATE AGENCIES REGULATORY ISSUES:

Medicaid Reform/Funding *To be determined*

A comprehensive bill regarding changes in the State Medicaid Program

Licensing of Nonresident Physicians *Support*

A bill to require Arkansas licensure for out-of-state
physicians providing radiology and pathology services

Intractable Pain *To be determined*

A bill to define intractable pain and provide protection
for physician prescribing

Criminal Record Checks *Support*

A bill to require criminal record checks for all health
care providers in treatment facilities

Physician Data Bank *Oppose*

A bill opening up the physician data bank (credentials,
malpractice claims, etc.) to public inspection

PUBLIC HEALTH:

Bottle Rockets *Support*

A bill to prohibit sale and use of bottle rockets

Tobacco Tax for Breast Cancer *Support*

A bill imposing a two-and-one-half cent per pack tobacco tax with
revenues dedicated to breast cancer research, treatment and education

AIDS Testing *Support*

A bill requiring AIDS test for pregnant women

Motorcycle Helmet Law *Oppose*

A bill to repeal the helmet law requirement in Arkansas

**Arkansas House of Representatives
(1997-1998)**

Representatives/Mailing Address/Home Telephone

Honorable Jerry Allison, 26 CR 744, Jonesboro, 72401	932-7960	Honorable James C. "Jim" Luker, PO Box 216, Wynne, 72396-0216	238-222
Honorable Evelyn L. Ammons, PO Box 1005, Waldron, 72958-1005	637-2765	Honorable Becky L. Lynn, PO Box 450, Heber Springs, 72543-0450	362-943
Honorable Sam E. Angel II, PO Box 748, Lake Village, 71653-0748	265-2346	Honorable Ode Maddox, PO Box 128, Oden, 71961-0128	326-432
Honorable Thomas G. "Tom" Baker, 124 Lawrence Road 532, Alicia, 72410	886-6013	Honorable Sue Madison, 573 Rock Cliff Road, Fayetteville, 72701-3809	442-299
Honorable David L. Beatty, PO Box 640, Lewisville, 71845-0640	921-4219	Honorable Jim Magnus, 10 Cimarron Valley Circle, Little Rock 72212	224-712
Honorable M. Dee Bennett, PhD, PO Box 17033, North Little Rock, 72117	945-7724	Honorable Percy Malone, 518 Clay Street, Arkadelphia, 71923-6024	246-717
Honorable Dave Bisbee, 14068 Pyramid Drive, Rogers, 72758-0116	636-2516	Honorable Ben McGee, PO Box 240, Marion, 72364-0240	739-417
Honorable Pat Bond, 717 Foxwood, Jacksonville, 72076	982-8872	Honorable W.K. "Mac" McGehee Jr., PO Box 4106, Fort Smith, 72914	452-511
Honorable Michael D. Booker, PO Box 45154, Little Rock, 72214-0154	224-8988	Honorable Bob McGinnis, 81 Highway 316, Marianna, 72360-8317	295-339
Honorable Shane Broadway, 201 S.E. 2nd, Bryant, 72022	847-7796	Honorable Louis M. McJunkin, PO Box 223, Springdale, 72765-0223	751-041
Honorable Irma Hunter Brown, 1920 S. Summit Street, Little Rock, 72202	372-4140	Honorable Jimmie Don McKissack, 3418 Hwy. 65 South, Pine Bluff, 71601	536-207
Honorable Randy Bryant, 14138 DeGraff Road, Rogers, 72756-8869	451-8649	Honorable John E. Miller, PO Box 420, Melbourne, 72556-0420	368-715
Honorable Ann H. Bush, PO Box 246, Blytheville, 72316-0246	763-7224	Honorable Jim Milum, 607 Skyline Drive, Harrison, 72601	741-753
Honorable John Paul Capps, PO Box 1488, Searcy, 72143-1488	268-8117	Honorable Joe Molinaro, 204 Amber Oaks Drive, Sherwood, 72120-2200	834-5581
Honorable David Choate, 709 N. Main Street, Beebe, 72012-2821	882-5743	Honorable Ted E. Mullenix, 140 Riverside Road, Hot Springs, 71913-9576	767-536
Honorable M. Olin Cook, 266 S. Enid Avenue, Russellville 72801-4534	968-4203	Honorable Bobby G. Newman, PO Box 52, Smackover, 71762-0052	725-3245
Honorable Tom C. Courtway, PO Box 56, Conway, 72033-0056	336-9208	Honorable Wanda Northcutt, PO Box 350, Stuttgart, 72160-0350	673-8427
Honorable Jack L. Critcher, PO Box 79, Grubbs, 72431-0079	252-3592	Honorable Pat G. Pappas, 2901 S. Willow, Pine Bluff, 71603-5061	536-4198
Honorable Ernest Cunningham, 727 Columbia Street, Helena, 72342-2813	338-6868	Honorable Carolyn Pollan, 400 N. 8th Street, Fort Smith, 72901-2204	782-6462
Honorable Arnil O. Curran, 210 W. Main Street, Clarksville, 72830-3010	754-2447	Honorable Billy Joe Purdom, Route 1, Box 135B, Yellville, 72687-9728	436-7739
Honorable Michael K. Davis, 15232 Hwy. 90 West, Ravenden Springs, 72460	869-2796	Honorable Jacqueline J. Roberts, PO Box 2075, Pine Bluff, 71613-2075	536-1723
Honorable John H. Dawson, PO Box 336, Camden, 71701-0336	836-2270	Honorable Sandra D. Rodgers, PO Box 595, Hope, 71802-0595	777-3907
Honorable Gunner DeLay, 4200 Free Ferry Lane, Fort Smith, 72901	782-4727	Honorable Roger L. Rorie, PO Box 136, Fox, 72051-0136	363-4549
Honorable James G. Dietz, 4221 Richards Road, North Little Rock, 72117	758-6703	Honorable Charlotte T. Schexnayder, PO Box 220, Dumas, 71639-0220	382-5256
Honorable Steve Faris, Route 2, Box 365, Malvern, 72104	337-7307	Honorable Courtney Sheppard, PO Box 1132, El Dorado, 71730-1132	862-1543
Honorable Scott Ferguson, MD, 200 S. Rhodes, #B, West Memphis, 72301	735-7098	Honorable Martha A. Shoffner, PO Box 44, Newport, 72112	523-3716
Honorable Lisa Ferrell, 702 N. Van Buren, Little Rock, 72205-3660	663-9350	Honorable Richard Simmons, 1751 CR 508, Rector, 72461	522-3204
Honorable Patrick H. Flanagan, 935 N. Washington, Forrest City, 72335	633-2602	Honorable Stephen M. Simon, 13 Bud Chuck Lane, Conway, 72032-9788	796-8466
Honorable Billi Fletcher, 403 W. Palm Street, Lonoke, 72086-3445	676-6634	Honorable Judy S. Smith, PO Box 213, Camden, 71701-0213	836-3945
Honorable George R. French, 190 Tracy Drive, Monticello, 71655	367-2804	Honorable Terry Smith, 181 Caroline Acres Road, Hot Springs, 71913	525-0249
Honorable Charles Roger Fuqua, 3907 Lankford St., Springdale, 72762	750-1107	Honorable E. Ray Stalnaker, 11714 Arch Street Pike, Little Rock, 72206	888-6724
Honorable Lloyd R. George, Route 1 East, Ola, 72853	489-5641	Honorable Charles W. Stewart Jr., PO Box 1167, Fayetteville, 72702-1167	442-6474
Honorable Larry Goodwin, PO Box 129, Cave City, 72521-0129	528-3721	Honorable Larry R. Teague, PO Box 903, Nashville, 71852-0903	845-3708
Honorable Rita Hale, 123 Westport Point, Hot Springs, 71913	525-1933	Honorable Edward "Ed" F. Thicksten, PO Box 2019, Alma, 72921-2019	632-4288
Honorable John Hall, 2429 Highway 348, Rudy, 72952-9401	471-1543	Honorable Ted J. Thomas, 900 S. Shackleford, #300, Little Rock, 72211	227-6684
Honorable Joe Harris Jr., PO Box 781, Osceola, 72370-0781	563-8360	Honorable Bobby Lee Trammell, 5213 Richardson Dr., Jonesboro, 72401	932-4639
Honorable David C. Hausam, 1214 N.E. 10th, Bentonville, 72712	273-7050	Honorable Stuart C. Vess, 6717 Pontiac Drive, North Little Rock, 72116	835-6284
Honorable Jim Hendren, Route 1, Box 260, Sulphur Springs, 72768-9758	298-3533	Honorable Wayne Wagner, PO Box 909, Manila, 72942-0909	561-4601
Honorable Bobby L. Hogue, PO Box 97, Jonesboro, 72403 SPEAKER	932-9752	Honorable Wilma Walker, PO Box 205, College Station, 72053-0205	490-0235
Honorable Barbara Horn, PO Box 64, Foreman, 71836-0064	542-6665	Honorable D.R. "Buddy" Wallis, Route 5, Box 489, Malvern, 72104	844-4895
Honorable Dianne Hudson, 104 Devon, Sherwood, 72120	835-4107	Honorable Charles Whorton Jr., Route 5, Box 2242, Huntsville, 72740	232-5741
Honorable Joe K. Hudson, PO Box 470, Mountain Home, 72653-0470	425-9031	Honorable Josetta E. Wilkins, 303 N. Maple Street, Pine Bluff, 71601	534-5852
Honorable Jerry F. Hunton, 14221 Greasy Valley Rd., Prairie Grove, 72753	824-5254	Honorable Ed Wilkinson, PO Box 610, Greenwood, 72936-0610	996-4260
Honorable Marian Owens Ingram, PO Box 449, Warren, 71671-0449	226-5276	Honorable Frank J. Willems, 2921 Union Road, Paris, 72855-2282	934-4213
Honorable Jimmy Jeffress, PO Box 1695, Crossett, 71635	364-8291	Honorable Jimmie L. Wilson, 1738 Phillips County 438 Rd., Lexa, 72355	827-6789
Honorable Bob Johnson, PO Box 173, Bigelow, 72016-0173	759-2001	Honorable Jim Wood, Box 219, Highway 33 West, Tupelo, 72169	744-2266
Honorable Myra Jones, 5201 Country Club Boulevard, Little Rock, 72207	664-7775	Honorable Tim Wooldridge, 100 College Drive, Paragould, 72450-9775	239-8763
Honorable Douglas C. Kidd, PO Box 137, Benton, 72018-0137	315-1555	Honorable Greg Wren, 1404 Caldwell Street, Conway, 72032-5365	327-3506
Honorable Jim Lancaster, 43 Toler Road, Sheridan, 72150	942-3481	Honorable Dennis Young, PO Box 1835, Texarkana, 75504	773-4139
Honorable Randy Laverty, PO Box 303, Jasper, 72641-0303	446-5593	District 52 - Vacant	

**Arkansas State Senate
(1997-1998)**

Senators/Mailing Address/Home Telephone

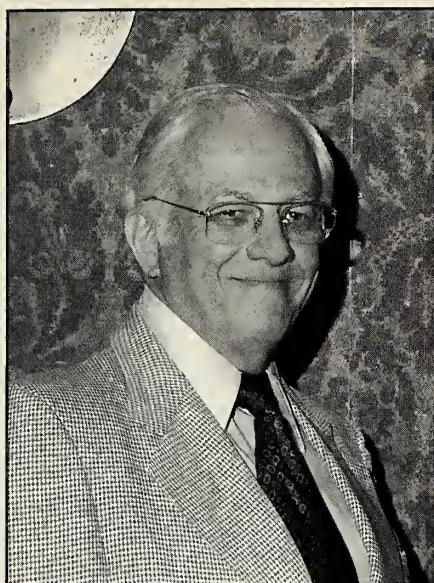
Honorable Jim Argue Jr., 5905 Forest Place, #210, Little Rock, 72207	224-8181	Honorable Gary D. Hunter, 145 Spring Lake Dr., Mountain Home, 72653	425-2220
Honorable Mike Bearden, PO Box 1824, Blytheville, 72316	762-0714	Honorable Peggy Jefferies, 1122 S. Waldron Road, #C, Fort Smith, 72903	452-4322
Honorable Mike Beebe, 211 W. Arch Avenue, Searcy, 72143	268-9452	Honorable Tom Kennedy, PO Box 2396, Russellville, 72801	967-3461
Honorable Steve Bell, 500 E. Main, Suite 208, Batesville, 72501	793-6232	Honorable Roy C. "Bill" Lewellen, PO Box 403, Marianna, 72360	295-6989
Honorable Fay W. Boozman III, MD, 2901 Honeysuckle Ln., Rogers, 72758	636-1019	Honorable Jodie Mahony II, 106 W. Main, #406, El Dorado, 71730	862-5950
Honorable Jay Bradford, PO Box 8367, Pine Bluff, 71611	535-5549	Honorable David R. Malone, PO Box 1048, Fayetteville, 72702	442-0633
Honorable John E. Brown, 17900 Ridgeway Drive, Siloam Springs, 72761	524-4667	Honorable Geno Roebuck, PO Box 1696, Jonesboro, 72410	935-4014
Honorable Eugene "Bud" Canada, PO Box 2110, Hot Springs, 71914	525-3126	Honorable Mike Ross, PO Box 374, Prescott, 71857	887-5020
Honorable Wayne Dowd, PO Box 2631, Texarkana, 75504 PRO TEM	772-0525	Honorable Stanley Russ, PO Box 787, Conway, 72033	329-8186
Honorable Jean Edwards, 8607 Earl Chadick Road, Sherill, 72152	766-4049	Honorable James C. Scott, 321 State Hwy. 15 North, Warren, 71671	226-5336
Honorable Mike Everett, 412 Broadway, Marked Tree, 72365	358-3560	Honorable Kevin Smith, 1609 Coker-Hampton Drive, Stuttgart, 72160	673-3422
Honorable Jonathan S. Fitch, Rural Route 1, Hindsdale, 72738	789-2608	Honorable Mike Todd, 333 W. Court Street, Paragould, 72450	239-2590
Honorable Allen Gordon, PO Box 558, Morriston, 72110	354-2122	Honorable William L. Walker Jr., PO Box 1609, Little Rock, 72203	375-5275
Honorable Bill Gwatney, PO Box 156, Jacksonville, 72076	982-4817	Honorable Bill Walters, PO Box 280, Greenwood, 72936	996-4520
Honorable Morril H. Harriman Jr., 522 Main Street, Van Buren, 72956	474-0480	Honorable Doyle L. Webb, PO Box 1998, Benton, 72018	315-4266
Honorable Jim Hill, 100 Center, Nashville, 71852	845-3273	Honorable Nick Wilson, PO Box 525, Pocahontas, 72455	892-8853
Honorable Cliff Hoofman, PO Box 1038, North Little Rock, 72115	758-9692	District 16 - Vacant	
Honorable George Hopkins, PO Box 913, Malvern, 72104	337-4442		

U.S. Congressional Correspondence:

Honorable Dale Bumpers, United States Senate, 229 Dirksen Senate Office Building, Washington, D.C. 20510 (202) 224-4843

Honorable Jay Dickey, U.S. House of Representatives, 230 Cannon House Office Building, Washington, D.C. 20515 (202) 225-3772

Newly-elected US Senator Tim Hutchinson and US Representatives Marion Berry, Asa Hutchinson and Vic Snyder, MD have temporary offices at this time. To telephone Senator Hutchinson, Congressmen Berry, Hutchinson or Snyder, dial the US Capitol Switchboard at 202-224-3121. Ask the operator for the Senator or the Representative by name and state.



Tribute to a Political Leader

**W. Payton Kolb, M.D.
1919-1996**

A champion for mental health issues and a credible spokesman in all other areas of medicine, Dr. W. Payton Kolb leaves behind a crevice impossible to fill. He served as AMS President in 1977-1978

As I was writing the Legislative Outlook for this issue of *The Journal*, I was notified that Payton Kolb, M.D., was in serious condition at Little Rock's Baptist Hospital. Before I completed the article, Dr. Kolb passed away on Sunday, December 8, 1996.

I walked the marbled halls for 13 years prior to joining the Arkansas Medical Society and Dr. Kolb was a fixture around the State Capitol. As a psychiatrist he was, of course, a champion for mental health issues and his reputation for honesty also made him a credible spokesman in all other areas of medicine (he began his career in family practice).

In my nine years as lobbyist for the Medical Society, Dr. Kolb became one of my closest friends and most trusted advisors. His institutional and legislative memory was incredible. I also discovered that his reputation extended from the halls of the State Capitol...to the halls of the Nation's Capitol...to his state and national specialty organizations...and to the American Medical Association.

I'm fortunate to have other doctors to advise me and to make the Capitol rounds in Little Rock and Washington, DC, but Dr. Kolb's absence from the political arena will leave a crevice that will be impossible to fill.

Z. Lynn Zeno, AMS Director of Governmental Affairs

Minutes of the Arkansas Medical Society House of Delegates November 17, 1996

Dr. Anna Redman, Speaker of the House of Delegates, called the meeting to order. Dr. John Crenshaw welcomed the Arkansas Medical Society members.

Dr. Larry Lawson gave an update on the sale of the AMS Management Company which was completed earlier this year. Dr. Lawson explained a letter was sent to gauge the interest of physicians in purchasing stock. A decision is pending before the AMCO board on whether to make a stock offer.

Mike Mitchell reported on the Any Willing Provider lawsuit. A decision on the case is pending before Judge Moody. All of the briefing and oral arguments have been completed and a decision is expected before the end of the year.

Dr. Gerald Stoltz, Chairman of the Council, made a special presentation to Ken LaMastus in honor of his twentieth anniversary with the Arkansas Medical Society.

Arkansas State Senator Mike Ross from Prescott addressed the House of Delegates on topics including welfare and tax reform, Medicaid, prison overcrowding, and the Any Willing Provider law. Senator Ross serves on the Public Health, Welfare, & Labor Committee.

Lynn Zeno, Director of Governmental Affairs, discussed proposed legislative issues for the 1997 Arkan-

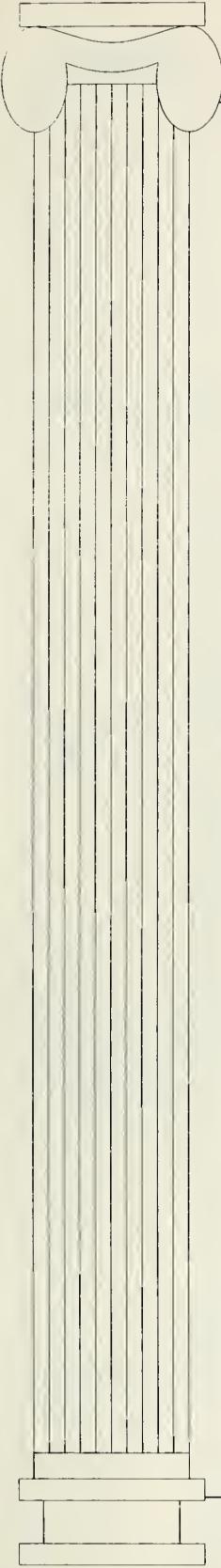
sas General Assembly. A few of the "hot" issues include a bill to define the responsibilities and authorize the use of medical assistants by physicians; bill to allow CRNA's to practice independently without physician supervision; bill to expand the optometry scope of practice; Patient Protection Act II; and Medicaid reform. State Representative Scott Ferguson joined Lynn in the discussion. The January issue of *The Journal of the Arkansas Medical Society* will include additional information regarding the upcoming Legislative Session.

Mike Mitchell discussed a request from the Arkansas Dental Association to participate in the Arkansas Medical Society's impaired physicians program. This would be at no additional cost to the Society. Upon motion the House voted to allow the dentists to participate with final approval coming from the AMS Executive Committee after details are complete.

A motion was made for the Arkansas Medical Society to go on record as being adamantly opposed to the Optometric Scope of Practice Act as currently written. The House approved this motion which was followed by a substitute motion to approve the entire legislative agenda as presented to the House. The House of Delegates approved the substitute motion.

There being no further business the meeting adjourned.





1997

Arkansas Medical Society

"Doctor of the Day"

Program Calendar

The Arkansas Medical Society Department of Governmental Affairs appreciates the participation by the many physicians who are volunteering their time to serve as "Doctor of the Day" during the 81st General Assembly.

The Society feels that in addition to the service provided to the legislators, the more AMS members we can involve in the legislative process the better.

The following pages list a calendar of physicians by day of volunteer service. The Society recognizes and extends a special thanks to "Doctors of the Day" participants.

JANUARY 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13 Charles W. Ball Jr., MD North Little Rock FP	14 Jim Ingram, MD Little Rock AI Tim T. Wilkin, DO Pine Bluff FP	15 Thomas L. Lewellen, DO Star City FP Charles S. Rodgers, MD Little Rock FP	16 J. Timothy Dow, MD Jonesboro FP	17 Nathan Austin, MD Russellville OTO	18
19	20 Charles W. Smith, MD Little Rock FP	21 W. Wayne Workman, MD Little Rock OBG David H. Taylor, MD Searcy IM/GI	22 Mark E. Miller, MD Russellville FP	23 Richard L. Hayes, MD Jacksonville FP J. Larry Lawson, MD Paragould GS	24 Jeffrey Carfagno, MD Maumelle FP J. Mayne Parker, MD Little Rock OPH	25
26	27 Fred Lyles, MD Hot Springs FP	28 James T. Crider, MD Harrison FP	29 Dennis W. Berner, MD Russellville IM	30 Charles R. Feild, MD Little Rock PD	31 Don Howard, MD Fordyce FP	
	J. David Talley, MD Little Rock CD	Russell Mayo, MD Texarkana FP	A. Bruce Junkin, MD Newport FP	Dwight M. Williams, MD Paragould FP		

FEBRUARY 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
Bruce E. Schratz, MD North Little Rock FP	James Arnold, MD Fayetteville ORS	Sidney P. Hayes, MD Little Rock PUD	G. Scott Harrington, MD North Little Rock FP	Roland C. Reynolds, MD Newport FP	David E. Stearns, MD DeQueen GS	
Kurtis Vinsant, MD Little Rock GS/VIS	H. Mark Attwood, MD Pine Bluff FP	Joe H. Stallings Jr., MD Jonesboro FP				
9	10	11	12	13	14	15
Joe V. Jones, MD Blytheville IMG	Nick J. Paslidis, MD Little Rock IM	Scott Dinehart, MD Little Rock D	Patricia J. Wilson, MD Little Rock D	G. Dean Ezell, MD Russellville IM	Adalberto Torres Jr., MD Little Rock PD/CCM	
C. David Williams, MD Little Rock CDS	Carl J. Raque, MD Little Rock D	R. Mark Dixon, MD El Dorado FP				
16	17	18	19	20	21	22
John W. Baker, MD Little Rock GS	Ben J. Kriesel, MD Clarksville FP	Thomas Braswell, MD England EM	Joseph Beck II, MD Little Rock ON	Jackie Coombe- Moore, MD Russellville P	S. Clark Fincher, MD Searcy IM	
Andrew M. Monfee, MD Russellville FP	Samuel B. Welch, MD Little Rock OTO/HNS	James G. Sheridan, MD Piggott IM	Stephen M. Schexnayder, MD Little Rock PD/IM			
23	24	25	26	27	28	
James E. Wise Jr., MD Marvell EM	Mike Buffington, MD DeQueen FP	R. Kyle Roper, MD Smackover FP	Thomas H. Benton, MD Salem GP	Carlton L. Chambers III, MD Harrison OTO	James C. Lambert, MD Greenbrier FP	
Dennis W. Jacks, MD Pine Bluff U	Suzanne Yee, MD Little Rock FPS/OTO	John W. Smith, MD Hot Springs IM/NEP	Bruce K. Burton, MD Malvern IM			

MARCH 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
Gavin R. Corcoran, MD Pocahontas IM/ID	David C. Covey, MD Searcy IM	Darren E. Flamik, MD Little Rock EM	William A. Beck, MD Little Rock AN	Jim English, MD Little Rock FPS/OTO		
Francis M. Henderson, MD Mount Ida OM	Jan R. Sullivan, MD Little Rock N	Kimberly Garner, MD Pine Bluff FP	Hamilton R. Hart, MD Fayetteville FP	Gregory S. Hall, MD Little Rock EM		
9	10	11	12	13	14	15
James Suen, MD Little Rock OTO/HNS	Kelly H. Meyer, MD Danville FP	Jerry L. Harvey, MD Pine Bluff FP	Roger E. Cagle, MD Paragould FP	Shirlene B. Hill, MD Lake Village GP		
Stevan M. Van Ore, MD Harrison FP	James A. Metrailler, MD Little Rock GE	Donald H. Pennington, MD Clarksville FP	R. Jerry Mann, MD Cabot FP	Julius Sheppard, MD El Dorado ORS		
16	17	18	19	20	21	22
James Harrell Jr., MD Little Rock CDS	H. Graves Hearnsberger, MD Little Rock OTO	Leslie Anderson, MD Lonoke FP	Herbert F. Fendley, MD Pine Bluff FP/IM	Barry V. Thompson, MD Crosssett FP		
Richard L. Taylor, MD Berryville FP	Lawrence J. Schemel, MD Springdale FP	Eugene M. Shelby, MD Hot Springs EM	David L. Stewart, MD Benton FP			
23	24	25	26	27	28	29
David Kolb, MD Little Rock EM	Steven W. Strode, MD Little Rock FP	James Meredith, MD Forrest City FP	Robert F. McCrary Jr., MD Hot Springs NEP	Jim C. Citty, MD Searcy FP		
Sandra L. Snow, MD Little Rock PD	Steven L. Thomason, MD Cabot FP	James Zini, DO Mountain View FP	Kris B. Shewmake, MD Little Rock PS	Sara McBee, DO Fayetteville FP		<i>See Next Page for Monday, March 31</i>

APRIL 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
March 30	March 31 <i>This date open for a volunteer "Doctor of the Day." Call Laura Harrison at 1-800-542-1058.</i>	1 John Rayburn, MD Hot Springs EM James C. Yuen, MD Little Rock PS	2 Gary M. Petrus, MD North Little Rock OTO	3 Omar T. Atiq, MD Pine Bluff ON/HEM H. Kevin Beavers, MD Russellville IM	4 Daniel Davidson, MD Searcy FP	5
6	7 C. Stanley Applegate Jr., MD Springdale GP	8 David E. Bourne, MD Little Rock FP	9 John M. Hestir, MD DeWitt FP	10 F. Michael Bauer, MD Little Rock CDS	11 James E. Kelly III, MD Fort Smith PS/HS	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

The Patient's Right to Know - Full Disclosure Laws are Necessary for Patients and Physicians

John Troupe, M.D.*

Increasing health care costs, overutilization, and the demand for alternatives to traditional fee-for-service care have led to the development of managed care, with its own risks of underutilization, and conflicts of interests that risk destruction of the doctor-patient relationship, the vital interface where treatment decisions have been made. Increasingly, treatment decisions are controlled by managed care organizations who provide physicians with incentives to withhold treatment. Whereas recommendations for treatment allow the opportunity for query, withholding treatment information deprives the patient of the knowledge necessary to make informed choices, and plans that encourage such veiling should be brought into the light.

Physicians, already in abundance, have seen little alternative than to cooperate with the managed care organizations. From 1975 to 1985 the number of new licensed medical doctors increased 40% while patient visits per week dropped 21%.¹ This decreasing patient load has made many physicians (particularly the young ones with massive debt), amenable to nontraditional plans that provide a stream of income. Managed care organizations sometimes use coercion to gain physician cooperation. For example, the organizations enter small towns, contract with employers to provide services, and make arrangements with the sole hospital to serve as the admitting facility. Then they gather the community physicians and smugly proclaim, "[l]adies and gentlemen, we control your patients, we control your hospital, now here is the deal we have for you." This leaves the physician with a choice of caving to the demands of the payor, or relocating his practice (sometimes after rearming with a law degree).

Although the ideal of working for the best interests of the patient is a basic principle in medical ethics, the principle of autonomy demands attention to the demands of the patient, and some patients may be tolerant of conflicts of interest in exchange for managed care, as long as they know of the conflicts are inherent with these plans.

Individual physicians could be required to disclose to the patient the parameters of her compensation arrangements with the patient. Disclosure requirements already exist for incentives to overutilize. At the Federal level, the Stark bills (42 U.S.C. § 1395) prohibit some referrals to physician owned facilities. Some states require disclosure of ownership interests in facilities or organizations to which they refer patients. Under California law,² physicians are prohibited from referring a patient to an organization in which the physician has a significant financial interest (the lesser of 5% or \$5000 ownership) without disclosing the interest in writing to the patient and advising him of his right to obtain services elsewhere. Florida prohibits referrals of patients to business entities in which the physician has an equity interest of 10% or more unless the patient has received prior notice of the financial interest and of his right to obtain services elsewhere.³ Massachusetts requires a physician, upon referring a patient for physical therapy, to disclose any financial ownership interest in the physical therapy facility and to inform patients of their right to obtain services elsewhere.⁴

Requiring the physician to disclose the existence of financial incentive under the doctrine of informed consent is not the best solution. The retrospective nature of the tort system can only offer after-the-fact compensation for any harms that the patient might have suffered because he did not know the physician was being given financial incentives to provide less care. Because informed consent is a negligence concept, the patient would have to demonstrate 1) that the doctrine of informed consent has been breached by nondisclosure of the financial incentive arrangement; 2) that the breach proximately caused harm; and 3) that if the patient had been informed about the existence of the arrangement he would have sought care from another provider using his own resources or would have actively petitioned the health plan for the treatment using established grievance procedures.⁵ It would be very difficult to establish that a patient was physically harmed by nondisclosure.

There are other problems with using the doctrine of informed consent. Despite the existence of a physician financial incentive arrangement, the physician has the primary authority to make treatment decisions and

* John Troupe, M.D., is a 1978 graduate of the University of Tennessee Center for Health Sciences in Memphis. He closed his ophthalmologic practice in Harrison, Arkansas, to pursue a law degree at the University of Arkansas in Fayetteville.

the presumption will likely be that she made the decision based on medical appropriateness, absent strong evidence to the contrary.⁶ If physicians are required to disclose arrangements as part of their duty to disclose all information material to the treatment decision, the patient will receive this at an awkward point - when the patient is processing often overwhelming clinical information. If the patient receives information about financial incentives when deciding whether to adopt treatment recommendations, this may be too late. The patient is already enrolled in the plan and may not be able to seek care elsewhere. Also, requiring the physician to disclose financial incentives would impugn the physician's professional integrity when there is no evidence that the arrangement is contaminating a particular treatment recommendation. The physician, with her loyalty divided between the patient and the managed care organization, may be reluctant to engage in a detailed discussion of the arrangement and downplay its significance. Thus, the disclosure may ultimately distract the patient from the information she seeks.⁷ Physicians might be more comfortable disclosing arrangements at the inception of the physician-patient relationship, when there might be no pending treatment decision but there could be a resulting breach of trust with greater harm than absence of disclosure. Patients expect that physicians will advocate on their behalf, and losing faith in the person who can help in a crisis can "cripple the foundation of hope essential to recovery."⁸

A patient would be better off receiving information on incentive arrangements directly from the health plan. If the patient does not approve of his physician being paid in a way that provides a disincentive to give care, he can seek out a health plan that compensates physicians in an acceptable way - assuming patient choice still exists.

An appropriate place for the impetus for such disclosure might be on the managed care organization. According to one commentator, "disclosure of such information as maximal benefits covered misleads subscribers who are not told of specific rules and incentives designed to make it unlikely these benefits will be offered."⁹

Federal law already requires disclosure of certain aspects of health plans to the enrollees. A written description of the health plan must be provided to enrollees and persons eligible to select an HMO as an option. The description is to provide "full and fair disclosure" of the elements of the plan, including participating providers, service area, benefits, procedures to be followed in obtaining benefits, and a description of circumstances under which benefits may be denied.¹⁰ Incentives to withhold treatment constitute circumstances under which benefits may be denied.

Federal law requires that HMO's establish grievance procedures, whereby enrollees can contest utilization review decisions that a particular treatment is not medically necessary.¹¹ Several states also have stan-

dards for HMO's and entities that practice utilization review that include the requirement of an appeals procedure for adverse decisions.¹² The existing grievance mechanism could be extended to allow members to complain that financial incentives encouraged nonreferral. The member could argue that knowledge of compensation used in her health plan empowered her to take a more active role in decisions affecting her health care. However, disclosure of and consent to incentives to withhold treatment would make this unnecessary. The Arkansas General Assembly has provided a statutory framework for the regulation of managed care¹³ which includes disclosure of information to enrollees.¹⁴ I propose an amendment to require explicit disclosure of incentives to withhold treatment. A bill has already been drafted to task an administrative agency¹⁵ with developing standards for the insurance commission, which oversees managed care organizations.¹⁶

House Bill 2094, which was introduced in the 80th Session of the Arkansas General Assembly (1995), addressed disclosure of incentives to withhold treatment, but the tactics of lobbying might be more effectively applied to a statutory amendment.¹⁷ The amendment requiring explicit disclosure of incentives to withhold treatment could "set the stage" for more comprehensive regulation of the managed care industry.

In conclusion, patient autonomy demands that the patient be informed of his treatment options. When the doctor patient relationship is distorted to encourage withholding of treatment options, the patient must at least be informed. Prohibition of incentives is unlikely. The modest proposal outlined in this paper offer the possibility that patients can continue to make informed choices.

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14. A.C.A. § 23-76- 114.
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16. *HMO Ark, Inc. v. Dunn*, 840 S.W.2d 804 (1992).
17. Recent conversation with the Arkansas Medical Society government affairs officer.

Arkansas Physicians in the AMA

Your Representatives to Medicine's Strongest Voice

James M. Kolb, Jr., M.D.

Editors Note: Dr. James M. Kolb, Jr., served as AMS President in 1994-1995. Since 1994, he has been an Alternate Delegate to the AMA. Beginning in January of 1997, Anna Redman, M.D., will assume this position.

Twice each year the Arkansas Medical Society sends three delegates and three alternates to meetings of the American Medical Association House of Delegates (HOD). I am sure some of you wonder if this is money well spent. What does the AMA do for me, us or the American people? As a departing member of your delegation, I will share with you my observations and experiences and try to answer those questions.

The formula for representation in the AMA is one delegate per 1,000 AMA members, or fraction thereof. Arkansas could have two or three more if all eligible physicians would "close ranks" with those of us who do belong and join the AMA.

Your delegation is led very capably by Jack Burge, M.D., of Lake Village. Other delegates are Drs. Jim Weber, of Jacksonville, and Bill Jones, of Little Rock. Alternates are Drs. John Hester, of DeWitt, Larry Lawson, of Paragould, and my successor, Anna Redman, of Pine Bluff.

To have a more effective delegation, Arkansas has joined with Oklahoma, Kansas and Missouri to form a much larger group known as the "Heart of America Caucus." More responsibility has come with this association. For example, at the annual meeting this past June, I was assigned to review and present to the Caucus the reports and resolutions to be discussed in front of Reference Committees B and D. This included approximately 17 reports, some quite lengthy and complex, plus 62 resolutions. At each June meeting our delegates are responsible for interviewing candidates for four Councils and the Board of Trustees. It takes a great deal of effort and time on the part of our staff and delegates to produce the desired results; a stron-

ger voice in the AMA, thus a more effective representation for you.

The House of Delegates (HOD) addresses hundreds of issues at every meeting within a five-day period. Our U.S. Senators and Representatives could learn from us how to function more efficiently.

There are usually nine reference committees, each made up of delegates appointed by the AMA Speaker of the House. Each is assigned resolutions submitted by component societies, such as the Arkansas Medical Society, in addition to reports and resolutions from the Councils and Board of Trustees. Delegates and members may discuss any issue before these reference committees. The order in which these issues are heard is predetermined by the Chairperson. No votes are taken. It is the duty of the reference committee to develop recommendations for the HOD based on the discussion and their judgment. Each item is brought before the HOD by number with the printed recommendations available to the Delegates. "Things" move very rapidly.

At the June 1996 meeting, two issues seemed to dominate the agenda; Physician Assisted Suicide and The Study of the Federation.

Physician Assisted Suicide - The national press with their television cameras and note pads were constantly in the hallways talking to physicians. They were also in the HOD chamber looking for a division in physician opinions regarding the issue of physician assisted suicide. The HOD held firm to its current policy that physician assisted suicide is unacceptable to the profession of medicine. The answer to relieving pain is not murder, but a renewed effort to get those who suffer to a physician with skills in pain management. The press quickly "faded away" - not interested in any of our other deliberations.

The Study of the Federation - The second most discussed issue in the hallways and conference rooms

was the Board of Trustee's Report on The Study of the Federation. The buzz word was "inclusiveness." Surprisingly, the report was adopted without any significant debate on the floor. The report establishes a new method of representation in the AMA. Association members are currently represented through their state medical society. As a result of the adoption of this report, members will also be able to designate a specialty society to represent them, in effect giving them dual representation. This proposal is an attempt to increase AMA membership through the specialty societies' efforts to gain additional representation in the HOD. It is also hoped to establish an ongoing dialogue with each and every specialty in order to prevent being surprised should differences arise on any issue. It is estimated that the HOD will increase in numbers by 60% or more.

All actions of the HOD are reported in the *American Medical News*, but I have also seen between 15 to 20 articles in newspapers and magazines regarding various issues addressed just this past June. Most give the AMA credit for making policies that are leading or have led to change in our society. The following are just a few examples of these policies.

The Oklahoma Delegation submitted Resolution 425 Counseling and Testing of All Pregnant Women. This was perhaps the most hotly debated issue discussed on the floor of the HOD. Recent studies have confirmed that effective treatment is possible to prevent many newborns delivered by HIV positive mothers from contracting the disease if the mother is diagnosed and treated with drug therapy during pregnancy. With this scientific information, Dr. Jones successfully led the "floor fight" against the Assistant Surgeon General, the President of the American Acad-

At the annual meeting in June, Dr. Jones was a candidate for the Council on Scientific Affairs. He came very close to winning a seat. It usually takes a number of years as a delegate to win such a coveted position on a Council or on the Board. Our delegation is proud of Dr. Jones and the Arkansas Medical Society staff for their dedicated effort in that nearly successful race. (*Bill, you should try it again for I believe your mission to the AMA will not be complete until your expertise is shared with the Council on Scientific Affairs.*)

emy of Obstetrics and many others "in high places." The opposition was afraid that pregnant women would not come in for prenatal care if they knew that an HIV test would be given. However, it was and is the duty of the AMA to establish standards of care based on science. All agreed that counseling remains the "bedrock" of care for these individuals.

A report from the Council on Scientific Affairs was adopted after being amended to read:

1. To promote physician office and other medical

settings as preferred settings in which to provide HIV testing.

2. For physicians to make HIV counseling and testing more available in a medical setting.

3. To monitor the use and efficiency of HIV home test kits and their impact on public health efforts to control the disease.

You can readily relate this call for action to the frequently seen television ads for home test kits.

Another report from the Council on Scientific Affairs - Fatigue, Sleep Disorders and Motor Vehicle Crashes - was adopted. Here is an article, written by medical writer Brenda C. Coleman, that recently appeared in the Arkansas Democrat-Gazette.

Sleepyheads at wheel
Fatigue-related accidents called
"America's hidden nightmare"

CHICAGO (AP) - *The secret killers on American highways are drowsy drivers and it's time for doctors to do something about it, a medical panel says.*

Drivers who aren't fully awake cause more than 1,500 traffic deaths a year. In 96 percent of the cases, the accidents involve passenger cars, not commercial drivers. There are about 43,000 vehicle deaths from all causes each year.

"This is America's hidden nightmare," said Dr. William Dement, director of Stanford University's sleep disorders program. He said the vast majority of highway accidents are not properly investigated as fatigue-related.

A panel of the American Medical Association panel has called on the AMA to suggest guidelines for drivers to avoid falling asleep at the wheel. The association's Council on Scientific Affairs said more research, enforcement and education are needed to keep drivers from becoming dangerously drowsy. The council also called for guidelines to license commercial and private drivers with sleep-related disorders.

The council made no specific recommendations about the regulation of drivers with sleep disorders, which can range from sleep apnea, in which the momentary closing of an airway awakens a person repeatedly, to chronic fatigue caused by a lack of sleep.

"It's very poorly understood by the American public," said Dement, who also is chairman of the National Commission on Sleep Disorders Research. "The American Medical Association now has a chance to be a leader in this whole area."

The council recommends that:

** The National Institutes of Health and other groups support more research on the prevalence of sleep-related disorders.*

** The Department of Transportation study the links between crashes and operator alertness and sleep.*

** The AMA urge federal agencies to improve enforce-*

ment of existing regulations for truck-driver work periods and consecutive working hours, and increase awareness of the hazards of driving while fatigued.

* The AMA urge physicians to learn more about sleep disorders, treat them more effectively and educate patients about them.

Commercial truck drivers must fill out log books verifying the number of hours they are on the road to prevent them from driving on too little sleep. But no regulation exists for passenger drivers.

Dement said if the AMA passes the council's report and recommendations, "it would just put this whole area right on the front burner."

AMA policy has no legal force, but it does direct the AMA's resources toward influencing legislators, doctors and the public.

Resolution 429, Assurance of Public Health Aboard Cruise Ships, was amended and adopted. This resolution urges the development of standards for the provision of medical care aboard cruise ships either through federal legislation or international treaty. An article in the *Arkansas Democrat-Gazette* regarding the need for standards of medical care reported a favorable response from cruise ship lines and the public to the AMA recommendations.

And let's not forget the war on tobacco! The AMA has long championed our efforts to reduce the use of tobacco. Their relentless efforts to bring this problem

to the attention of the American public has paid big dividends. Public policy toward smoking has undergone tremendous changes. The health status of thousands of people has been affected by the AMA's battle with the tobacco industry. Tobacco addiction among children and the detrimental effects on their lives was a major issue used by President Clinton during the recent elections. President Clinton also "picked up on" the AMA's call for educational television programming for children. In June, the HOD recommended at least six hours per week. Due largely to that recommendation, it is now law that each station broadcast at least three hours of educational programming for children per week.

The relevance of the AMA's actions in our daily lives goes on and on!

Those physicians who are members of the AMA are to be commended, for this country is a much better place to live because of the actions of the House of Delegates.

May I recommend to you who are not members... join this month!

It has broadened my medical knowledge to have been an alternate delegate. I thank you for allowing me this experience. I do encourage my former fellow delegates to bring to you the highlights and important issues by way of monthly articles in your journal, *The Journal of the Arkansas Medical Society*.

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Hazards of Heparin

J. Kelley Avery, M.D.*

Introduction

In large hospitals where significant numbers of cardiovascular surgical procedures are done, and where cases of deep vein thrombosis and pulmonary embolism are all too common, heparin medication becomes so routine that its hazards come to be minimized in the management of these problems. The following case is an example of this danger.

Case Report

A 71-year-old man with multiple health problems had in the past been hospitalized for a bleeding gastric ulcer, acute urinary retention, prostatic cancer with transurethral resection of the prostate (TURP), COPD, and hematuria thought to be due to a post-TURP stricture of the urethra. He was a known type II diabetic, and had been seen in the hospital emergency room for blood pressures of 220-200/120-110 mm Hg.

This present illness and hospitalization was brought about by a history of sleep apnea, which had been investigated in the sleep laboratory of another hospital. The patient was thought to have "redundant pharyngeal tissue" that should be treated surgically. In the preoperative workup by a cautious otolaryngologist, a history of exertional chest pain was discovered, causing the internist to admit his patient to the hospital. His admission history did not record the previous bleeding gastric ulcer, which had been treated in another hospital, but did carefully document the exertional discomfort that had been getting worse for the past few months, and the other health problems that were a part of the record at this hospital. The physical examination was not remarkable, and the laboratory work was within normal limits, with a hematocrit of 44.2%. A cardiologist was consulted, and cardiac catheterization was scheduled. A severe degree of stenosis was found in the left anterior descending coronary artery (LAD) with less obstruction in the right coronary artery. The circumflex artery was said to show

some "irregularities without narrowing." Angioplasty done two days after the initial catheterization failed to open the LAD, and in fact, some slowing of the flow was observed distal to the point of the dilatation site. An emergency coronary artery bypass graft (CABG) was done, with routine heparinization prior to the catheterization and surgery. Post-CABG the hematocrit was 40%. Bloody urine was noted per Foley catheter.

The day after surgery the hematocrit was recorded at 34.1% Heparin was ordered at 100 mg every eight hours and the following day the hematocrit was 28.6%. The patient began to complain of nausea, for which symptomatic treatment was given. When the hematocrit appeared to stabilize for a day or two, heparin was continued. By the third postoperative day, the patient had begun to have more abdominal discomfort, and while standing at the bedside he began to retch and vomit green emesis. The abdominal discomfort continued but was easily managed. Iron was given on the fourth postoperative day, with the hematocrit at 26%. Nausea continued, and some abdominal distention was noted. Some serosanguineous fluid was noted oozing from the incision, and another cardiac surgeon was asked to follow the patient because he was thought to have more experience with wound management and could offer the patient a better outlook. During this day the patient began to have some shortness of breath. Small, loose stool was reported but not described. Heparin was continued.

On the fifth postoperative day the hematocrit was 22.1%. Two units of packed red blood cells were given. A "good BM" was reported the following day but not described. An order was written to check all stools for blood. On the seventh postoperative day a black stool was reported, and thereafter all stools were reported 4+ for blood. Heparin was continued, and the hematocrit remained at 22%. On the night of the eighth postoperative day the patient became disoriented, and upon being turned on his side the following morning during his bath, respiratory arrest occurred. Resuscitation was not successful. An autopsy reported "exsanguination from a large gastric ulcer that had eroded into a medium-sized gastric artery." The 100 mg heparin flushes were continued during the last day of this man's life.

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in July 1993. It is reprinted here with permission.

Both the internist and the surgeon were named in the lawsuit that was filed in this case, and a large settlement was negotiated.

Loss Prevention Comments

Perhaps the initial lesson to be learned from this case is that the past history must be complete and not limited to the patient's history in one institution or with one physician no matter how long and varied that history is. This patient's history of a bleeding ulcer at another institution was not part of his record of his last admission.

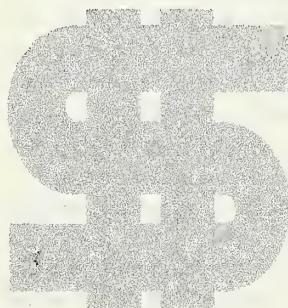
Of course, the tragic terminal event of massive GI bleeding could have occurred even had the heparin

therapy been stopped days earlier. The PT/PTT determinations had not indicated that too much anticoagulant was being given. It would appear that the routine use of heparin in all CABGs had become so established that it escaped the daily evaluation of this patient's condition. Thus the abdominal symptoms and their possible implications were ignored.

It would be well to look carefully at your institution's "Adverse Drug Reactions" for heparin. If it is significant (and it probably is), consider developing a physician-led team to develop an institution-wide protocol for heparin use in all of its indications. That exercise could result in the prevention of patient injury, and thus real medical malpractice loss prevention.

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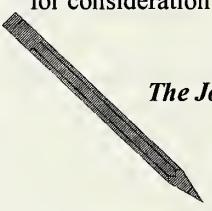
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Arkansas Medical Society

Day at the Capitol

Wednesday, February 5, 1997

Morning Program

Little Rock Hilton
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Evening Reception

Aerospace Education Center
3301 E. Roosevelt Road
Little Rock, Arkansas



Arkansas Medical Society members, spouses, clinic managers and guests are invited to the bi-annual "Day at the Capitol" program on Wednesday, February 5, 1997. This important event will begin with a morning legislative briefing at the Little Rock Hilton, followed by a visit to the State Capitol.

While visiting the State Capitol, personally invite your local legislator to join us at 6:30 p.m. for a reception honoring the Arkansas General Assembly at the Aerospace Education Center (IMAX Theater). Look over the impressive facilities of the Aerospace Education Center and enjoy watching the Arkansas Razorbacks play the Tennessee Volunteers. (*Tip-off is at 7:05 p.m.*)

The Governmental Affairs Council invites everyone (physicians, spouses, clinic managers and guests) to attend all day, but especially encourages your attendance at the evening reception. It is imperative to have one member per legislative district.

Schedule of Events

Morning Registration
Legislative Briefing
Lunch

9:30 a.m.
10:00 a.m.
Noon



Visit State Capitol
AMS Council Meeting
Evening Reception

1:30 p.m.
4:00 p.m.
6:30 p.m.

Legislative issues are won by those who show up!

Registration Form

Registration Fee:	Lunch & Reception	\$35 per person	<input type="checkbox"/> Indicate # Attending
	Lunch Only	\$15 per person	<input type="checkbox"/> Indicate # Attending
	Reception Only	\$25 per person	<input type="checkbox"/> Indicate # Attending

Name(s) (Please Print): _____

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Cardiology Commentary and Update

Ruxana Sadikot, M.D.*

Naresh Patel, M.D.**

Eugene Smith, M.D.**

Joe Bissett, M.D.**

J. David Talley, M.D.**

Lidocaine-Induced Cardiac Asystole

Lidocaine is used widely for the treatment of ventricular arrhythmias, especially in the setting of an acute myocardial infarction. The safety of intravenous therapy with lidocaine is a major reason for its popularity. Adverse effects to lidocaine are dose-related and manifest mostly as central nervous system toxicity. Sinus node depression is a rare complication of lidocaine administration, when used singly or in conjunction with other antiarrhythmic agents. Sporadic case reports have appeared describing this rare but fatal complication.¹⁻³ We report a patient with lidocaine induced asystole who was on digoxin and amiodarone.

Patient Presentation

A 65-year-old white male, presented to the emergency room following a rollover motor vehicle accident. He had a complicated past medical history which included prior coronary artery bypass graft surgery, a cerebrovascular accident, non-insulin dependent diabetes mellitus, atherosclerotic peripheral vascular disease, hypothyroidism, systemic arterial hypertension and hyperlipidemia (see Complete Problem List, Table 1). His medication included ticlopidine, gemfibrosil, enalapril, synthroid, digoxin (0.125 mg qD) and amiodarone (200 mg qD). In the Emergency Department, he was unconscious with an irregular pulse rate of 102 beats per minute, and the blood pressure was 150/78. Telemetry monitoring revealed frequent premature ventricular contractions and some of these appeared as couplets. A twelve -lead electrocardiogram showed normal sinus rhythm, multiple ventricular premature complexes, seen in isolation and in pairs, and an intraventricular conduction delay of the left bundle branch block type (Figure 1). Electrolytes were normal with potassium of 4.8 and magnesium of 1.7. Hemoglobin and hematocrit were 11.7 and 31.2 respectively. He was treated with a bolus of intravenous lidocaine (100 mg), followed by an infusion at a rate of

2 mg/min. Within minutes of receiving the lidocaine he developed asystolic pauses more than nine seconds in duration and required brief support with a transcutaneous pacemaker (Figure 2). The lidocaine infusion was discontinued. No further asystolic pauses were recorded and his arrhythmias were controlled with intravenous amiodarone. He eventually had a stormy course in the intensive care unit due to multiple medical problems and died after 6 days.

Discussion

Lidocaine, a widely used local anesthetic, was first used as an antiarrhythmic agent in the 1950's, to treat arrhythmias induced by cardiac catheterization.⁴ It has a low incidence of toxicity and very often is the first drug of choice in the management of ventricular arrhythmias. The benefit of lidocaine as a prophylactic agent for ventricular arrhythmias in patients with myocardial infarction is questioned and current American College of Cardiology/American Heart Association guidelines discourage its use in this setting.^{5,6}

Lidocaine suppresses the electrical activity of the depolarized, arrhythmogenic tissue while minimally interfering with the electrical activity of normal tissues. It acts exclusively on the sodium channels and blocks both activated and inactivated channels. Recovery from the block is very rapid and hence it has a greater effect on the ischemic tissue. Lidocaine decreases automaticity by reducing the slope of phase 4 and altering the threshold for excitability. It has little effect on atrial fibers, does not affect conduction in accessory pathways, and is of little use in the treatment of supraventricular arrhythmias.

It has been reported to suppress the sinus node activity in sick sinus syndrome.⁷ It rarely suppresses activity of normal sinus node at therapeutic dosage,¹⁻³ but this complication has been reported when the drug is administered along with other antiarrhythmics like quinidine, phenytoin, amiodarone and digoxin.⁸⁻¹⁰ The mechanism of sinus arrest is enhanced depression of diastolic depolarization of the sinoatrial node and suppression of impulse formation.

* Dr. Sadikot is from the Department of Internal Medicine, UAMS Medical Center.

** Drs. Patel, Smith, Bissett and Talley are with the Division of Cardiology, Department of Internal Medicine, UAMS Medical Center.

Lidocaine has extensive first pass hepatic metabolism, with only 3% of orally administered lidocaine appearing in the plasma. It is administered in 2-3 intravenous boluses separated by 20-30 minutes, to a total loading dose of 3-4 mg/Kg, followed by an infusion at a rate of 1-4 mg/min. Several factors require a reduction in lidocaine dosing. Congestive heart failure reduces the volume of distribution and requires a lower loading dose and slower infusion rate. Severe liver disease affects drug metabolism and requires a lower infusion rate. Advanced age increases the likelihood of drug side effects and calls for modifying both loading and maintenance doses.

Most common adverse effects of lidocaine are neurological and include paraesthesia, tremor, nausea of central origin, light headedness, hearing disturbances, slurred speech and convulsions. When given in large doses, it may produce hypotension in patients with heart failure. Apart from the interactions with the above mentioned antiarrhythmics, it is also known to interact with propranolol, cimetidine and mexiletine.⁴ Propranolol and cimetidine impair the disposition of lidocaine causing increased levels. Mexiletine lowers the threshold of lidocaine toxicity; hence the dosage of lidocaine should be decreased, when administered concomitantly.

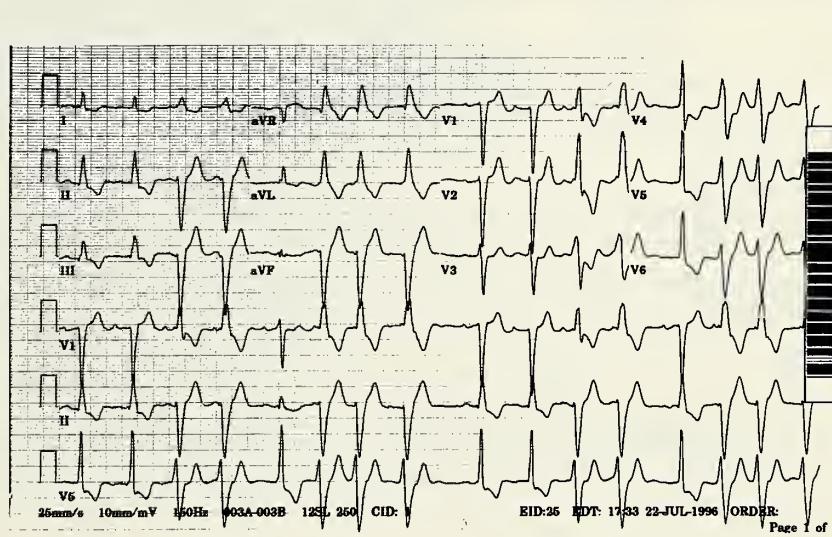
In the patient presented, asystole was probably due to an interaction of effects of lidocaine, digoxin and amiodarone. Pre-existing sinus node dysfunction cannot be excluded. This patient presentation describes a rare complication of lidocaine, and is a reminder, that this medication should be used judiciously in conjunction with other antiarrhythmic agents.

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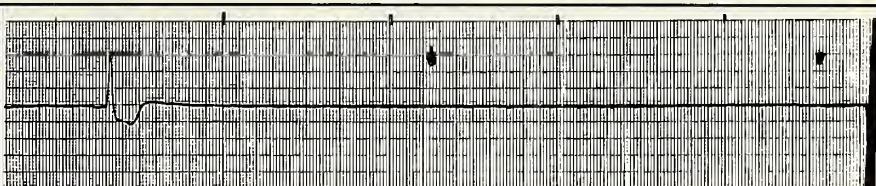
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Table 1

1. Heart Disease	A. Atherosclerosis B. Systemic Arterial Hypertension C. Diabetes Mellitus
Etiology:	A. Coronary artery bypass graft surgery, 1989 B. Echocardiogram → concentric left ventricular hypertrophy, dilated left ventricular cavity
Anatomy:	A. Electrocardiogram → normal sinus rhythm, intra-ventricular conduction delay, multiple ventricular complexes B. Echocardiogram → apical akinesis, ejection fraction <20%
Physiology:	C. Rhythm strip → prolonged sinus pause treated with temporary pacing
Functional Assessment:	Severely compromised
Objective Assessment:	Severely compromised
2. Non-insulin dependent diabetes mellitus	
3. Systemic arterial hypertension	
4. Hyperthyroidism	
5. Prior cerebral vascular accident, 1996	



1. 12-lead electrocardiogram reveals normal sinus rhythm, multiple ventricular premature complexes, seen in isolation and in pairs, and an intraventricular conduction delay of the left bundle branch type.



2. Rhythm strip of the prolonged sinus pause (more than nine seconds in duration) after lidocaine was administered. The patient had previously been receiving digoxin (0.125 mg qD) and amiodarone (200 mg qD). The pauses were treated with temporary cardiac pacing and resolved after the lidocaine was stopped.

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Reported Cases of Selected Diseases in Arkansas Profile for October 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Oct. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases 1995	Total Reported Cases YTD 1994	Total Reported Cases 1994
Campylobacteriosis	14	209	125	153	162	187
Giardiasis	19	139	111	131	108	126
Shigellosis	11	116	101	176	169	193
Salmonellosis	38	400	293	332	485	534
Hepatitis A	48	424	544	663	225	253
Hepatitis B	3	66	68	83	50	60
HIB	0	0	6	6	5	5
Meningococcal Infections	0	29	31	39	56	55
Viral Meningitis	2	30	31	31	62	62
Lyme Disease	2	23	10	11	15	15
Rocky Mountain Spotted Fever	1	21	31	31	18	18
Tularemia	1	19	20	22	20	23
Measles	0	0	2	2	1	5
Mumps	0	1	6	5	5	7
Gonorrhea	494	4369	4838	5437	5898	7078
Syphilis	41	644	892	1017	913	1096
Legionellosis	0	1	6	5	14	16
Pertussis	2	10	59	59	32	33
Tuberculosis	25	195	197	271	198	264

For a listing of reportable diseases in Arkansas, call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893 during normal business hours.

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The Infectious Disease Update - March 7 and 8, 1997

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- | | |
|--|--|
| Antibiotic Jeopardy..... | J. Thomas Cross, M.D., MPH , Shreveport, LA |
| The Evaluation of Children with Recurrent Fever..... | Susi Maxson, M.D. , Ft. Worth, TX |
| Pharyngitis | Steven Hickerson, M.D. , Tyler, TX |
| New Vaccines..... | Gordon Schutze, M.D. , UAMS/ACH |
| Update on Polio & Pertussis Vaccines..... | Richard Jacobs, M.D. , UAMS/ACH |
| The Use of Passive Immunizations in Children | J. Gary Wheeler , UAMS/ACH |
| When to Use Hepatitis A Vaccine | Gordon Schutze, M.D. , UAMS/ACH |
| Red Book Update..... | Richard Jacobs, M.D. , UAMS/ACH |
| Varicella Vaccine..... | Toni Darville, M.D. , UAMS/ACH |

For more information or reservations, call Kristi Schichtl in our CME office at (501) 320-1248.

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Arkansas HIV/AIDS Report

1983-1997

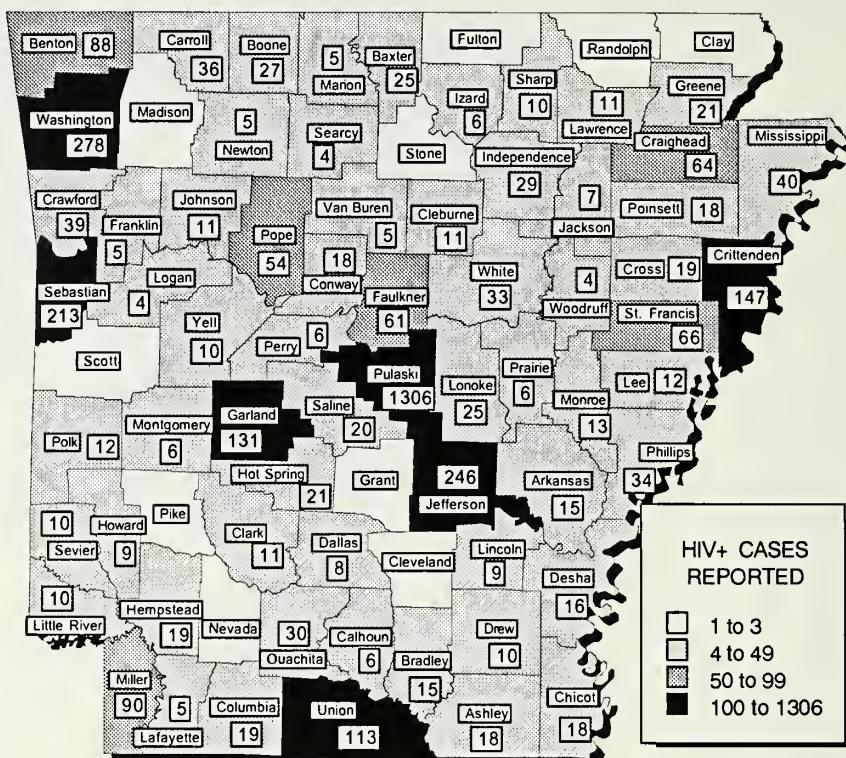
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



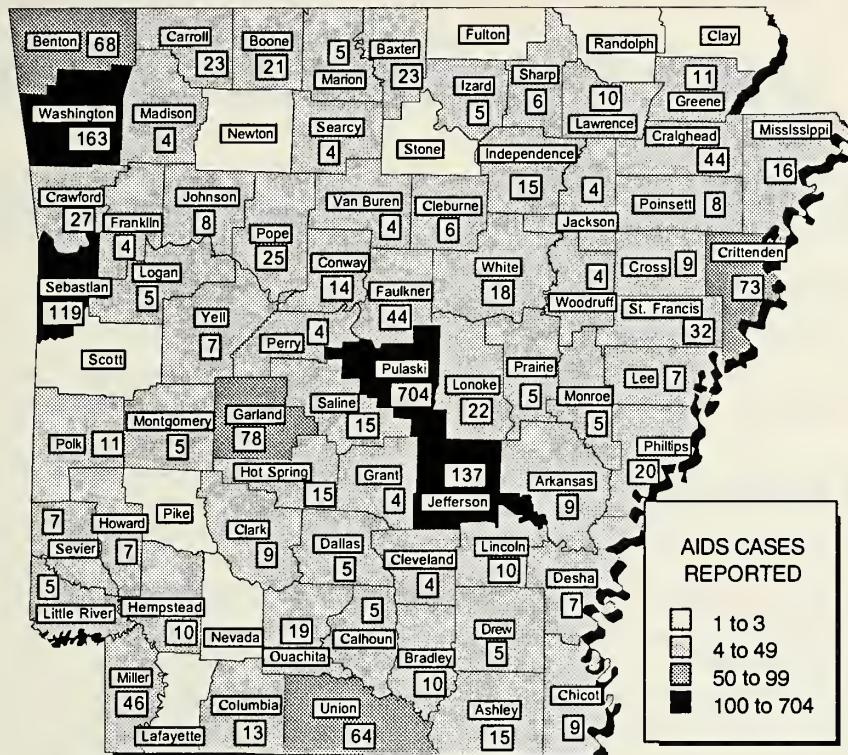
County of residence at time of test for the 3,729 Arkansans reported to be HIV-positive (11/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	100	215	248	413	400	392	352	367	338	250	3,075	82
	Female	8	26	37	68	85	81	94	90	91	74	654	18
A G E	Under 5	1	1	2	8	13	6	3	7	2	1	44	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	20	138	4
	20-24	12	40	52	71	44	49	64	60	47	27	466	13
	25-29	21	70	71	112	104	107	111	85	78	63	822	22
	30-34	25	50	64	116	120	111	91	102	101	71	851	23
	35-39	19	36	40	80	88	69	77	69	81	64	623	17
	40-44	16	17	17	43	52	41	47	50	46	32	361	10
	45-49	6	8	18	13	20	25	18	27	24	18	177	5
	50-54	2	1	5	8	14	14	10	12	17	14	97	3
	55-59	1	3	4	6	3	13	6	7	5	8	56	2
	60-64	1	0	1	1	2	6	5	9	8	1	34	1
	65 and older	4	2	1	2	3	5	2	7	7	5	38	1
R A C E	White	87	170	174	328	298	293	278	260	260	171	2,319	62
	Black	21	69	108	151	184	173	163	184	160	139	1,352	36
	Hispanic	0	1	3	1	3	4	1	7	3	4	27	1
	Other/Unknown	0	1	0	1	0	3	4	6	6	10	31	1
R I S K	Male/Male Sex	65	138	144	245	250	261	242	230	167	115	1,857	50
	Injection Drug User (IDU)	13	30	48	74	96	76	65	73	56	21	552	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	27	17	255	7
	Heterosexual (Known Risk)	5	25	26	59	67	68	100	96	69	51	566	15
	Transfusion	5	7	4	6	8	10	0	2	3	1	46	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	0	17	31	39	16	10	7	23	102	119	364	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	324	3,729	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1997



Of the 3,729 Arkansans reported to be HIV+, 2,137 have been diagnosed with AIDS. (11/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and other persons required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
S E X	Male	85	77	70	170	176	250	334	253	238	192	1,845	86
	Female	5	6	10	20	25	35	64	42	36	49	292	14
A G E	Under 5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	3	20	1
	20-24	7	5	11	11	14	14	31	22	11	13	139	7
	25-29	24	22	13	44	43	67	78	45	47	39	422	20
	30-34	20	21	21	47	42	73	98	81	75	70	548	26
	35-39	19	15	20	31	38	55	80	52	49	48	407	19
	40-44	10	7	4	21	35	28	49	39	35	35	263	12
	45-49	5	3	3	14	6	24	28	22	17	18	140	7
	50-54	1	1	2	5	6	7	10	12	15	4	63	3
	55-59	2	2	4	1	4	8	8	5	6	7	47	2
	60-64	1	1	1	1	1	2	6	10	5	1	29	1
	65 and older	1	4	0	4	2	2	3	3	9	3	31	1
R A C E	White	74	61	58	141	134	206	273	190	174	132	1,443	68
	Black	16	20	21	47	66	75	121	102	97	104	669	31
	Hispanic	0	1	0	0	1	3	3	2	3	3	16	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	2	9	0
R I S K	Male/Male Sex	55	59	50	122	120	183	237	166	138	108	1,238	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	49	19	303	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	15	169	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	35	36	226	11
	Transfusion	2	7	3	7	11	4	2	4	3	1	44	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	1	35	2
	Undetermined	0	2	1	3	1	1	2	8	19	61	98	5
AIDS CASES BY YEAR		90	83	80	190	201	285	398	295	274	241	2,137	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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Are you currently taking any medication? If yes, name and amounts of medications:

ALSO SEND A QUOTE FOR:

Name _____ Sex M F

Date of Birth _____ Tobacco User Yes No Form _____

Amount of Coverage \$ _____ Term Length: 4 Yr 8 Yr 18 Yr

Are you currently taking any medication? If yes, name and amounts of medications:

Getting Acquainted

Ben N. Saltzman, M.D. Journal Editorial Board Member

Dr. Ben N. Saltzman, a retired physician and surgeon of Mountain Home, is one of six editorial board members for *The Journal of the Arkansas Medical Society*. He has been on the editorial board since its inception in March of 1988. Dr. Saltzman has contributed greatly to the quality of *The Journal* by submitting numerous editorials and by reviewing many scientific articles for publication consideration.

To him, being an active member of the AMS means having an opportunity to meet with others in his chosen profession - to learn from them, to share in their desire to help others by giving of themselves and their knowledge and to strive to make the world a better place for future generations.

When asked what he believes is the most important issue facing the AMS, Dr. Saltzman said, "It is important for AMS to continue to function as an organized body in order to serve the people of our communities through doing the jobs we have been trained to do in the most compassionate way possible. All things will then fall in place naturally."

Dr. Saltzman's experience in the medical field is vast, to say the least. His contributions - not only in medicine - but to his country and to Arkansas are remarkable. After serving in World War II as a United States Army medical officer in the early to mid-'40s, Dr. Saltzman settled in Mountain Home where he practiced medicine as a clinician for the next 27 years.

A pioneer of medical growth in northern Arkansas, Dr. Saltzman led a steering committee to handle the development of Baxter General Hospital; the first hospital in the area. It opened in November of 1963.

In 1974, Dr. Saltzman was the first Professor and Chairman of the Department of Family and Community Medicine at the University of Arkansas for Medical Sciences where after seven years he retired as Professor-emeritus. He then went on to serve as Director of the Arkansas Department of Health for six years and finally retired after four more years as Medical Director of the Pulaski County (Little Rock) Health Unit of the Department of Health.

Dr. Saltzman's participation in health- and community-related activities is astounding. Throughout his career, he has served as President for nearly 15 professional and community organizations including the Arkansas Medical Society (1974-1975).

Nationally, he has served on the Boards of the American Lung Association and the Association for Retarded Citizens. In Mountain Home, he served on the city Council for seven years and four terms as President of the Chamber of Commerce. He is a 33rd degree Scottish Rite Mason, and for the past five years has served as President of the Arkansas 4-H Foundation Board of Trustees.

Dr. Saltzman was born in Ansonia, Connecticut, on April 24, 1914. He received his Bachelor of Arts, Master of Arts, and Doctor of Medicine degrees from the University of Oregon. More recently, he received the Doctor of Science degree from the University of Arkansas.

Dr. Saltzman was married to Ruth Elizabeth (Betty) Bohan. She died in May of 1994. They have four grandchildren and are the parents of three children, Sue Ann, 51, a secretary and housewife of Arlington, Texas; John Joseph, 47, a railroad engineer of Batesville, Arkansas; and Mark Stephen, 39, an airline pilot for Delta of Dallas, Texas.



Hobbies: Fluorescent rock collecting and demonstrating, sphere making and polishing, being a home handyman and growing flowers.

If I had a different job, I'd be: Wealthy

The person I most admire: President Bill Clinton

Best Habit: Sleeping soundly when I get the opportunity

Worst Habit: Contributing to worthwhile causes, monetarily

One of my pet peeves:

Having my name placed on contribution lists by people who should know better. It becomes a case of killing the Golden Goose.

Favorite book, television show and/or movie: I like action stories in books, films and videos

Favorite writer: Louis L'Amour

Favorite actor: Chuck Norris in *Walker, Texas Ranger*

The turning point of my life was when: I married my favorite nurse, Betty Bohan, on December 19, 1941, in the Panama Canal Zone

When I was a child, I wanted to grow up to be: A doctor

My philosophy of life: In tune with Barbara Streisand's favorite song: I am the luckiest person in the world in that I need people

One word to sum me up: Trusting

New Members

ASHDOWN

Vorhease, James W., Family Practice. Medical Education, UAMS, 1980. Residency, Eglin Air Force Base, Fort Walton Beach, Florida, 1983. Board certified.

BENTON

Woods, William K., Radiation Oncology. Medical Education, Albert Einstein College of Medicine, Bronx, NY, 1990. Internship, Englewood Hospital, Englewood, New Jersey, 1991. Residency, University of California at Irvine, Orange, Calif., 1995. Board certified.

CLARENDON

Yunus, Nauman, Internal Medicine. Medical Education, Dow Medical College, Pakistan, 1988. Internship/Residency, State University of New York, Stony Brook, 1993/1995. Board certified.

EL DORADO

Parker, Arthur Wade, Internal Medicine. Medical Education, University of Mississippi School of Medicine, Jackson, 1981. Internship/Residency, UAMS, 1982/1984. Board certified.

FAYETTEVILLE

Murry, William Lee, Anesthesiology. Medical Education, UAMS, 1987. Internship, AHEC-Northwest, 1988. Residency, UAMS, 1991. Board certified.

HARRISBURG

Bush, John M., Internal Medicine. Medical Education, University of Tennessee, Memphis, 1992. Internship/Residency, Medical College of Ohio, Toledo, 1993/1995. Board eligible.

HOT SPRINGS

Sorenson, Marney Keith, Surgery. Medical Education, University of Texas Health and Science Center, San Antonio, 1991. Internship/Residency, UAMS, 1992/1996. Board eligible.

LEWISVILLE

Bailey, Colin Raines, Family Practice. Medical Education, University of Texas Medical School, Houston. Internship/Residency, Waco Family Practice Center, Waco, Texas, 1996. Board certified.

LITTLE ROCK

Collins, Gary J., Cardiology. Medical Education, Uniformed Services University of the Health Sciences, Bethesda, Maryland, 1982. Residency, Wright-Patterson USAF Medical Center, 1985. Board certified.

Dolak, James Alexander, Anesthesiology. Medical Education, Case Western Reserve University School of Medicine, Cleveland, Ohio, 1991. Internship/Residency, Emory University Affiliated Hospitals, 1992/1995. Board eligible.

Montgomery, Lori E., Pediatrics. Medical Education, UAMS, 1989. Internship/Residency, Arkansas Children's Hospital, 1990/1992. Board certified.

Nichol, Brian T., Anesthesiology. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995. Board certified.

St. Amour, Scott C., Radiology & Nuclear Medicine. Medical Education, Rush Medical College, Chicago, Illinois, 1990. Residency, Jewish Hospital of St. Louis, 1994. Fellowship, Washington University Medical Center, St. Louis, 1995. Board certified.

MONTICELLO

Rodriguez, Paul Lopez, Radiology. Medical Education, University of Tennessee, Memphis, 1966. Internship, St. Joseph Hospital, Phoenix, Arizona, 1967. Residencies, L.A. General Hospital and St. Joseph Hospital, 1969/1970. Board certified.

NORTH LITTLE ROCK

Maxwell, Teresa Marnette, Family Medicine. Medical Education, UAMS, 1993. Residency, UAMS, 1996.

PARGOULD

Yamada, Ronald Ryo, Orthopedic Surgery. Medical Education, University of Chicago, Pritzker School of Medicine, Chicago, Illinois, 1974. Internship/Residency, University of Southern California, 1975/1979. Board certified.

RESIDENTS

Parchman, Anna Janette, Family Practice. Medical Education, UAMS, 1995. Internship/Residency, UAMS, AHEC-Southwest.

STUDENTS

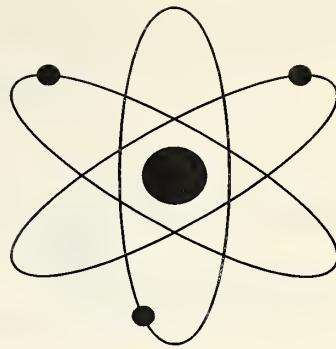
Michelle Lynn LaCroix

Radiological Case of the Month

David Harshfield, M.D., Editor

Authors

Dean M. Moutos, M.D.
Michael M. Miller, M.D.



History:

A 38-year-old morbidly obese female presented with regular cyclical menses and primary infertility. Prior to attempting a hysterosalpingogram (HSG), the scout film shown below was obtained. Due to the patient's enormous size and non-compliance, the HSG could not technically be performed.



Calcified Uterine Leiomyomata

Diagnosis: Calcified uterine leiomyomata

Radiologic Findings:

A large multi-lobulated calcified mass is seen arising from the pelvis and extending into the lower abdomen.

Discussion:

Leiomyomas are common benign tumors of smooth muscle in the myometrium. They can be found in 20-30% of women 30 years of age and older. They are frequently multiple, with each myoma originating from a distinct monoclonal cell that has undergone a somatic mutation which results in loss of growth regulation. Many leiomyomas are cytogenetically abnormal with chromosomes 7, 12 and 14 most frequently affected. Malignant transformation to leiomyosarcoma is thought to be extremely rare. Calcification of myomas frequently occurs after hemorrhage or necrosis of the tumor.

Most myomas are asymptomatic and require no treatment. When symptomatic, myomas can cause pelvic pain, menorrhagia, recurrent pregnancy loss and infertility. The peak incidence of symptomatic myomas requiring treatment is in the 5th decade of life. Myomas generally regress and become asymptomatic after menopause. Treatment of symptomatic myomas includes hysterectomy (for those women who have completed childbearing) or myomectomy (for those women desiring to preserve their fertility). Myomas are usually suspected on pelvic exam when an irregularly enlarged uterus is found. The diagnosis is readily confirmed with ultrasonography.

References:

1. Barbieri R, Andersen J. Uterine leiomyomas: The somatic mutation theory. Sem Reprod Endocrinol 1992; 10:301-9.
 2. Cramer S, Patel D. The frequency of uterine leiomyomas. Am J Clin Pathol 1990; 94:435-8.
 3. Verkauf B. Myomectomy for fertility enhancement and preservation. Fertil Steril 1992; 58: 115.
-

Authors:

Dean M. Moutos, M.D., is with UAMS Department of Obstetrics and Gynecology.

Michael M. Miller, M.D., is with UAMS Department of Obstetrics and Gynecology.

Editor:

David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

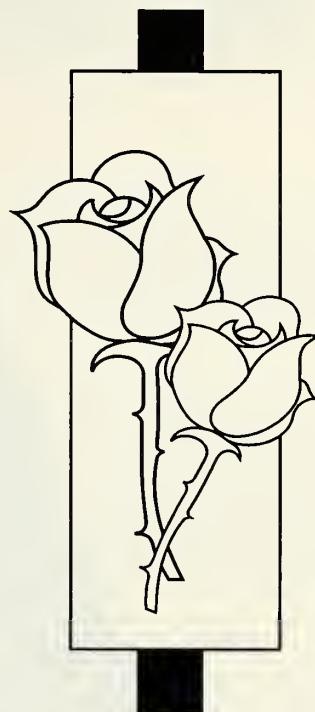
In Memoriam

Neil E. Crow, Sr., M.D.

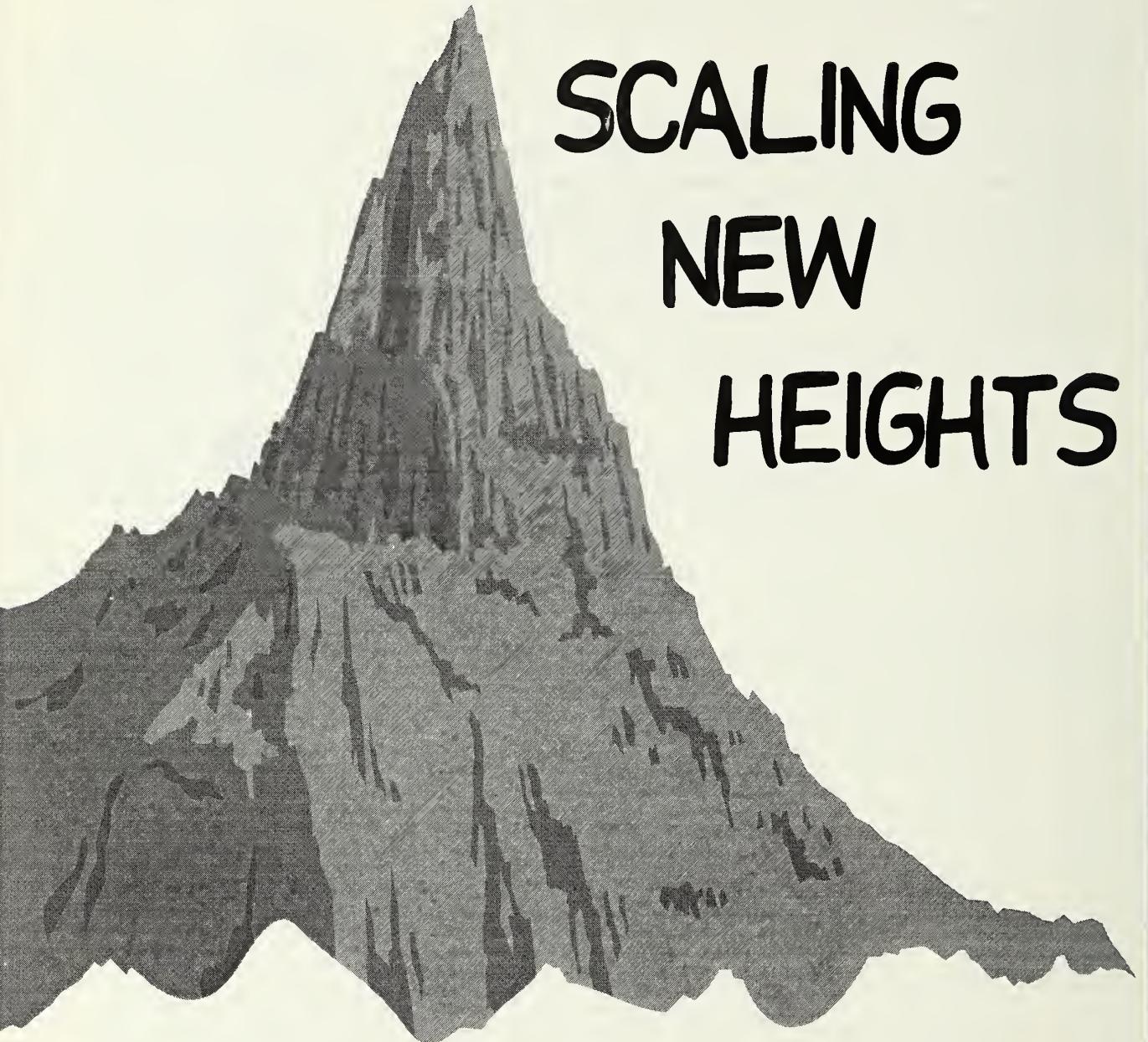
Dr. Neil E. Crow, Sr., of Fort Smith, died Monday, November 11, 1996. He was 71. He was preceded in death by his wife, Mary Katherine Crow. Survivors are two children, Dr. Neil E. Crow, Jr., and Katherine Lee Crow Miller, both of Fort Smith, and five grandchildren.

W. Payton Kolb, M.D.

Dr. W. Payton Kolb of Little Rock, died Sunday, December 8, 1996. He was 77. He is survived by his wife, Margaret Sparks Kolb of Little Rock; one daughter, Salli Kolb DeFoor of Little Rock; and one granddaughter, Amanda Dees of Little Rock. Dr. Kolb was preceded in death by one son, Carl Kolb, who died in 1974.



ARKANSAS MEDICAL SOCIETY 1997 ANNUAL CONVENTION



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Things To Come

February 8-10, 1997

12th Annual Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Center for Continuing Medical Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 9-14, 1997

Advances in Imaging: 1997. Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Tulane University Medical Center and Louisiana State University School of Medicine. For more information, call (504) 588-5466 or 1-800-588-5300.

February 20-23, 1997

Current Issues in Gynecologic Endoscopy. The Resort at Squaw Creek, Squaw Valley, California. Sponsored by the American Association of Gynecologic Laparoscopists. For more information, call (310) 946-8774 or 1-800-554-2245.

February 26-28, 1997

The Third National Primary Care Conference: Community-Based Academic Partnerships. Washington Sheraton Hotel, Washington, DC. Sponsored by Health Resources & Services Administration, U.S. Department of Health & Human Services. For more information, call (301) 986-4870.

March 7-9, 1997

Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Crowne Plaza Manhattan, New York City. Sponsored by the Center for Bio-Medical Communication, Inc., in collaboration with the American Foundation for AIDS Research. For more information, call (201) 385-8080.

March 21-25, 1997

North American Skull Base Society 8th Annual Meeting Combined with 2nd International Congress on the Cerebral Venous System 2nd International Congress on Meningiomas. The Excelsior Hotel, Little Rock, Arkansas. For more information, call (301) 654-6802.

April 4-5, 1997

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 10-12, 1997

Refresher Course & Update in General Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 25-27, 1997

1997 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Co-sponsored by the Alton Ochsner Medical Foundation and Tulane University School of Medicine. For more information, call (504) 842-3702 or 1-800-778-9353.

September 5-7, 1997

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20, 1997

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.



Keeping Up

February 12, 1997

A.S.A.M.I. Seventh Annual Scientific Meeting. Time: 8:00 a.m. - 6:00 p.m. Location: ANA Hotel, San Francisco, California. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: To be determined. Fee: To be determined. For more information, call (501) 661-7962.

March 1, 1997

Southwest Arkansas Physician Update. Time: 8:30 a.m. - 3:30 p.m. Location: Lile Hall, Quachita Baptist University, Arkadelphia. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: To be determined. Fee: To be determined. For more information, call (501) 661-7962.

March 1, 1997

Diabetes Update. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn. Program presenters: UAMS Division of Endocrinology/Arkansas Diabetes Program Course Director: Dr. Vivian Fonseca. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: Before February 1, 1997, Physicians - \$75 and others - \$50; after February 1, 1997, Physicians - \$100 and others - \$60. For more information, call (501) 661-7962.

March 1, 1997

Diabetes Update. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn. Program presenters: UAMS Division of Endocrinology/Arkansas Diabetes Program Course Director: Dr. Vivian Fonseca. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: Before Feb. 1, 1997, Physicians-\$75 and others-\$50; after Feb. 1, 1997, Physicians-\$100 and others-\$60. For more information, call (501) 661-7962.

March 4, 1997

Obesity: Common Symptom of Diverse Gene-Based Metabolic Dysregulations. Time: 8:00 a.m. - 4:30 p.m. Location: Little Rock, Excelsior Hotel. Program presenters: UAMS and Biochemistry and Molecular Biology. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: To be determined. For more information, call (501) 661-7962.

March 14-15, 1997

Neurology for the Primary Care Physician. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn Select. Program presenters: UAMS Department of Neurology. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: To be determined. Fee: \$150 for Physicians. For more information, call (501) 661-7962.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Breast Conference, 3rd Thursday, 7:00 a.m., J.A. Gilbreath Conference Center, Room #20
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Disorders Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal
Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118

VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas .
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital



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Volume 93 Number 9

February 1997

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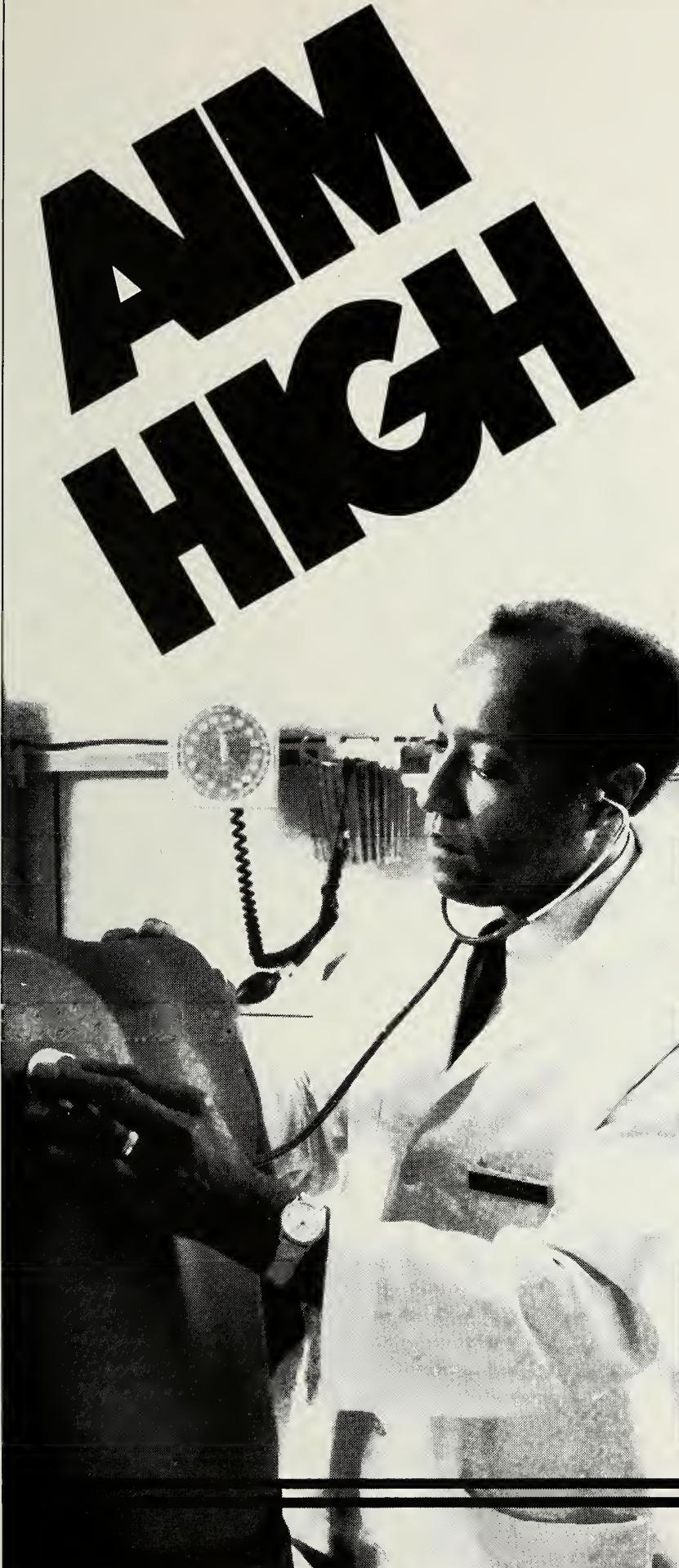
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Cover photo provided by the Arkansas Department of Parks & Tourism.

BALANCING on a Four-legged Stool

Alex Finkbeiner, M.D.*

After any prolonged conversation with a new acquaintance the question of occupation invariably arises - "What do you do?" As an academic urologist I have always found it difficult to give a succinct reply.

I have been reflecting on this question recently as the Promotion and Tenure Committee at UAMS, of which I am a member, deliberated and made recommendations regarding this year's candidates for promotion and tenure. During evaluations of the candidates one must ask of the candidate not only "What do you do?" but also "How well do you do it?"

Historically, promotion and tenure (climbing the academic ladder) was essentially based upon the "publish or perish" mantra by which one was judged by scientific output most often reflected by journal publications. It was generally just assumed one adequately performed one's teaching and other roles primarily due to lack of objective criteria upon which to judge one's effectiveness in these roles.

At UAMS we have attempted to define, evaluate and reward clinical academic staff regarding the "What do you do?" and "How well do you do it?" questions. Each individual is expected to allocate a percentage of their time amongst the four traditional roles of a medical academician (the four-legged stool): teaching, research, patient care and service. Unlike a four-legged stool, the distribution of workload may not necessarily be distributed equally along each leg but will vary amongst individuals. In turn, objective criteria have been established for each of the four roles by which an individual can be evaluated. By comparing the percentage of time allocated for each role to the criteria to be met within each role the institution and the academician can better evaluate their job effectiveness while using more objective criteria for rewarding them through promotion and/or salary incentives. By better delineating both the roles and the criteria for fulfilling these roles it would appear that the "What you do and how well" questions can be easily addressed. The continually changing medical environment, however,

forces us to continually reevaluate these questions.

Let me try to explain why and expand the "What do you do?" question. The major impact of what we do and why we do it in academic medicine dates to the mid-1960's when changes in financing medical education commenced and continue to evolve to this day. Since that time, federal and state monies to finance medical education have progressively diminished relative to the total financial needs of medical institutions, and medical schools have been forced to find alternative sources of income. Today, the major source of funding for clinical academic medicine is by fees generated through patient care, hospital and physician charges and collections. Federally funded research grants are less readily available than in the past and do not constitute a significant source of income for most departments. Further, state appropriated funds constitute less than 15% of our departmental budget necessitating that over 85% of our department's budget be derived from professional fees.

We in academic medicine are state employees in that we are hired by and work for a state institution and are governed by state employee regulations. Alternatively, our reliance on over 85% of our operating budget on professional fees generated by patient care places us more into a private practice milieu. That is, a major portion of our business expenses including salaries for physicians, nurses, office personnel as well as all fringe benefits, etc. are derived from professional fees. Further, there are expenses not encountered in private practice. Most expenses for resident education such as books, journals, education seminars and professional meetings are derived from professional fees. Unless one has strong grant support, most scientific and education endeavors by the academic physician such as publication costs, expenses to attend meetings to present one's research as well as local and statewide educational talks are financed from professional fee income.

The reliance on professional fee income is further complicated by the perception that UAMS and its affiliated institutions are the charity hospitals. It is common for patients to present to our clinics or for us to

* Dr. Finkbeiner is Professor of Urology in the Department of Urology at UAMS. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

receive phone calls from physicians referring patients because the patients are indigent and/or have no medical insurance; they have not passed the "wallet biopsy" test. The costs in man hours, supplies and equipment incurred for caring for these patients are enormous to both the University Hospital and to the individual physicians. My personal collection rate is less than 50% primarily because of the large indigent population served. These patients truly need medical care, and student and resident exposure to these patients contribute to their education, but these nonreimbursed services significantly impact on the allocation of the academician's time and effort.

This brings us back to the four-legged stool. The service leg includes institutional, departmental, committee and administrative activities which can be very time consuming. The research leg is one of the two traditional legs of academia (the other being education). It is still the predominant leg upon which one is judged academically, and to be productive in research requires considerable time, effort and financial resources. Education responsibilities are multiple and diverse. These include didactic lectures, informal rounds, conferences, seminars and teaching concomitant with direct patient care. Students are as diverse as medical students, nursing students, residents, fellow practitioners and/or lay groups. This vitally important role of teaching has traditionally been the most difficult to define, quantitate and evaluate.

Three legs of service, research and teaching are essentially non-income producing (unless one has substantial research grants) and frequently many generate expenses that must be paid from professional fees. Within this context, the non-income producing indigent care role must also be included.

With three legs of the four-legged stool not producing income (four legs of a five-legged stool if patient care is split into indigent and non-indigent patients) a potential dilemma arises for both the institution and the individual academic physician. The dilemma being the pragmatic urge to shift one's weight on the four-legged stool to one leg - the income producing leg of patient care for paying patients who are the financial life-blood for the institution, the department and the individual physician. This becomes even more compelling and attractive within the current environment of changing markets within medicine and diminishing fees and income.

The consequences of this weight shift are obvious. As one devotes more attention, time and effort to patient care one must either reduce time and effort expended to one or more of the other three roles or expand one's work week to simply maintain the time and effort expended on those three roles. Many of us are already maintaining a sixty-plus hour work week. You non-academic physicians are directly impacted by this dilemma of ours for this accentuates the old town and gown issue. As we try to attract and maintain a paying patient base we are competing with you for the same patient population. We are competing for these patients for the same reason you are - to pay the bills. Further, we in academia are fully aware of the irony of us educating and training medical students and residents to go out and become our competition.

I suspect continued pressures will be exerted on academic physicians to excel in all four of their roles, but unless alternative sources of income can be found the new mantra will be "publish and produce income or perish." Further, we must do this while trying to maintain excellence in our roles of service and teaching.

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Medicine in the News

Health Care Access Foundation

As of January 1, 1997, the Arkansas Health Care Access Foundation has provided free medical service to 12,088 medically indigent persons, received 22,852 applications and enrolled 44,440 persons. This program has 1,757 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Physician-Assisted Suicide: What do the Elderly Think?

Surveys of physicians and the general public show a relatively high acceptance of physician-assisted suicide (PAS). In this study, researchers at Duke University focused specifically on the opinions of elderly patients and their family members. They surveyed 168 oriented elderly patients (average age, 76 years) being seen at a geriatric specialty clinic for a variety of chronic medical problems and 146 family members. Each group was blinded to the responses of the other.

Only 40% of patients had favorable views toward PAS in cases of terminal illness, compared to 59% of relatives. Both groups were much less approving of PAS in cases of chronic but not obviously fatal illness, and in cases of mental incompetence. Patients with the most favorable attitudes toward PAS were male, white and had higher incomes and more education. Family members were fairly poor at predicting the responses of their patient-relatives.

Comment: This is one of the first studies on attitudes toward PAS to focus on frail elderly patients. This group seems less enthusiastic about PAS than younger persons surveyed in previous studies. Physicians cannot look to family members to give accurate guidance about their relatives' wishes in this matter. - TL Schwenk

Koenig HG; et al. Attitudes of elderly patients and their families toward physician-assisted suicide. *Arch Intern Med* 1996 Oct 28; 156:2240-8.

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Postwar Morbidity and Mortality among Persian Gulf Veterans

Some military personnel who served in the 1990-91 Persian Gulf War have reported adverse health effects from infections, oil-well fires, chemical or biologic warfare agents, and other causes. These two government-funded studies examined postwar mortality and hospitalization among these veterans through late 1993.

First, researchers compared mortality data for

695,000 Gulf War veterans and 746,000 military personnel who served in 1990-91 but did not go to the Persian Gulf. After adjustment for baseline differences between the two groups, Gulf War veterans had a significant 9% higher mortality rate during the two years after the war. However, accidents - not diseases - accounted entirely for the excess deaths.

The second study used similar methodology to examine postwar hospitalizations. The overall rate of hospitalization was not higher for Gulf War veterans than for other veterans. Gulf War veterans had slightly higher hospitalization rates for some diagnoses and lower rates for others; however, there was no pattern to these differences, with the possible exception of excess hospitalization for alcohol and drug dependence.

Comment: These studies provide considerable reassurance, but do not exclude the possibility of war-related physician ailments that did not result in significant excess death or hospitalization. Moreover, the increases in accidental death and alcohol- and drug-related hospitalizations are noteworthy. - AS Brett

Kang HK; Bullman TA. Mortality among U.S. veterans of the Persian Gulf War. *N Engl J Med* 1996 Nov 14; 335:1498-1504.

Gray GC; et al. The postwar hospitalization experience of U.S. veterans of the Persian Gulf War. *N Engl J Med* 1996 Nov 14; 335:1505-13.

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Smoking Prevalence in the States

In what the CDC calls a "milestone for public health surveillance," the Council of State and Territorial Epidemiologists recommended in June that cigarette smoking be added to the list of conditions "reportable" to the CDC by the states - the first time a behavior, rather than a disease, has earned this dubious honor. This report summarized state-by-state smoking rates for 1995.

Overall, the median U.S. smoking rate for people over age 17 was 22.4%. Utah had the lowest rate (13.2%) and Kentucky the highest (27.8%).

Some states have achieved major reductions in smoking through physician advice, smoke-free indoor-air policies, cigarette taxes and increased prices, and counter-advertising campaigns. Between 1984 and 1995, smoking prevalence in California declined from 26% to 16%. A Massachusetts antismoking campaign and excise tax increase on cigarettes (from 26 to 51 cents per pack) beginning in 1993 lead to a decline of almost 20% in the packs purchased per adult.

Comment: Utah alone has achieved the year 2000 goal of an adult smoking rate of 15% or less. The Massachusetts and California experiences suggest that the

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55	\$66.99	\$77.00	\$107.44	\$128.76	\$148.77	\$209.67
65	\$171.61	\$202.06	\$271.66	\$338.00	\$398.90	\$538.10

* Based on male, preferred non-tobacco rates. Female rates may be lower. Medical examination required; will be paid for by insurance company.

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Date of Birth _____ Tobacco User Yes No Form _____

Amount of Coverage \$ _____ Term Length: 4 Yr 8 Yr 18 Yr

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aim is feasible, but we'll have to get cracking. The Massachusetts programs began with a public ballot initiative, suggesting a political will to reduce smoking. - DM Berwick

State-specific prevalence of cigarette smoking - United States, 1995. MMWR 1996 Nov 8; 45:962-6.

Cigarette smoking before and after an excise tax increase and an antismoking campaign - Massachusetts, 1990-1996. MMWR 1996 Nov 8; 45:966-70.

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Recent Trends in Physician Services Market

Results from the AMA's Socioeconomic Monitoring System surveys indicate several interesting trends in the medical practice marketplace.

Median physician net income (after expenses, before taxes) increased 6.7% in 1995, offsetting a 3.8% decrease in the previous year. These opposing results for the last two years illustrate the danger of drawing long-term conclusions based on change in one year alone. (The statistics in this report are for nonfederal patient care physicians, excluding residents.)

The two-year change in income amounts to an average annual increase of 1.3% from 1993 to 1995, which, when adjusted for inflation, represents an average annual decline of 1.4% in real income. Since 1992, median income increases have averaged 2.2%, below the inflation rate of 2.8%.

For comparison purposes, national health expenditures increased an estimated 6.1% in 1994, according to the Health Care Financing Administration.

The long-term trend away from self-employment and toward employee status continued in 1995. The proportion of employee physicians grew from 36% to 39%. Nearly all of these additional employees came from the ranks of self-employed physicians, whose market share dropped to 55% from 58%. Since employees generally earn less than the self-employed, the trend is one that would tend to restrain increases in average physician income. The percentage increase in income for self-employeds was greater than the increase for employees in 1995.

Incomes of self-employed physicians are nearly 50% higher than those of employees. Part of the differential is a return on entrepreneurship, investment, and risk taking, over and above the compensation for providing physician services. A differential is necessary to attract capital to any enterprise. Other factors contribute to the differential. For instance, self-employeds tend to be older, have more years of experience, work more hours, and are more likely to be board certified, all of which are associated with higher earnings. Controlling for these factors, the income differential due solely to employment arrangement would be much less than 50%.

Three-fourths of employee physicians receive non-

cash benefits in addition to their reported income, whereas some self-employed physicians do not. These benefits are about 5% of income for employees. Therefore, a comparison of total compensation would show that the differential would be narrower than one based on cash income alone.

Income varies considerably from one specialty to another. In 1995, average income was lowest among general/family practitioners and pediatricians and highest for radiologists and surgeons, among the specialties examined separately.

The change in income from 1994 to 1995 varied substantially across specialties. Primary care specialties generally enjoyed increases that were greater than the average for all physicians; the exception was the broad category of internal medicine, for which median income was unchanged. Increases for surgical specialties were below the all-physician average. Pathology had the largest percentage increase in 1995, but that followed a year in which it had the largest

Table 1: Median Physician Net Income (in thousands of dollars) after Expenses before Taxes for Non-Federal Physicians, by Specialty, Employment Status, and Census Region, 1995.

	Percentage Change <u>1995</u>	<u>from 1994</u>
All physicians	\$160.0	6.7%
<i>Specialty</i>		
General/Family practice	124.0	12.7
Internal Medicine	150.0	0.0
Surgery	225.0	2.7
Pediatrics	129.0	17.3
Obstetrics/Gynecology	200.0	9.9
Radiology	230.0	4.5
Psychiatry	124.0	3.3
Anesthesiology	203.0	1.5
Pathology	185.0	21.7
Other	170.0	13.3
<i>Employment Status</i>		
Self-employed	199.0	13.1
Employee	136.0	4.6
Independent Contractor	155.0	10.7
<i>Census Region</i>		
Northeast	155.0	10.7
North Central	160.0	0.0
South	170.0	6.3
West	160.0	6.7

Source: AMA Socioeconomic Monitoring System 1995 and 1996 core surveys of nonfederal patient care physicians excluding residents.

decrease.

Managed care contracting increased markedly. In 1995, 83% of physicians had contracts with managed care organizations, compared with 77% in 1994. Further, the share of revenue from those contracts (among physicians with contracts) declined slightly, from 34% to 33%. How these events correlate with changes in net income is a subject of continuing research. It is safe to say, however, that managed care is not the only nor necessarily the most important factor affecting income changes from year to year.

Published research suggests that "managed care has shifted the demand for physician services toward primary care providers, while reducing utilization, fees, or both for all physicians." (Simon and Born, "Physician Earnings in a Changing Managed Care Environment," *Health Affairs*, Fall 1996). These findings are consistent with income patterns by specialty discussed here.

Income tends to vary less across geographic regions than specialties. Nevertheless, some notable variations occurred for 1994-1995 changes in income. Increases were highest for physicians in the northeast, unchanged for those in the central states, and about average for those in the south and west.

While median net income represents what the doctor at the 50th percentile earned, the distribution of physician income is very wide and many fall far below that figure. For example, among pediatricians, one-fourth made \$95,000 or less, compared with the median of \$129,000.

Physician Earnings in Context

Physicians typically begin practicing between the ages of 26 and 35. In 1995, the average age of a medical school graduate was 28. Counting postgraduate education, many physicians are in their early thirties before starting to practice.

Residencies can last up to eight years. Residency pay is low; the median stipend for 1994-1995 is about \$33,000, and yet residents work an average of 80 to 100 hours per week.

Most physicians incur high educational debt by the time they begin to practice. Seventy-nine percent of 1994 graduates reported some level of debt, with the average for those with indebtedness amounting to \$63,885.

Physicians work longer hours than is typical in the labor force. The average number of hours spent in professional activities per week by physicians was 56.7 in 1995, about 42% more than the typical 40-hour week.

About the Survey

Information on medical practices is collected in an annual survey, the Socioeconomic Monitoring System (SMS). The survey sample is drawn randomly from the AMA's Physician Masterfile. Responses are ob-

tained through telephone interviews of approximately 4,000 physicians. The statistics are weighted to adjust for survey nonresponse bias to improve the precision of estimates of income for the entire physician population. Both office- and hospital-based physicians are included. Nonmembers of the AMA are included in addition to AMA member physicians. Specialties are self-designated. All medical practice information is self-reported. Self-employeds are full or part owners of their practices. Net income is defined as income after expenses before taxes. Income comprises all earnings from medical practice, including fees, salaries, retainers, bonuses, and deferred compensation.

For the purposes of the SMS, a "physician" is defined as a nonfederal, post-resident MD involved typically at least 20 hours per week in patient care activities. Roughly two-thirds of the nation's 720,325 physicians fall into this category. More than 200,000 lower-earning resident, non-patient-care, federal, and inactive physicians are excluded from these statistics. - *Information provided by the AMA.*

Table 2: Mean Physician Net Income (in thousands of dollars) after Expenses before Taxes for Non-Federal Physicians, by Specialty, Employment Status, and Census Region, 1995.

	<u>1995</u>	<u>Percentage Change from 1994</u>
All physicians	\$195.5	7.2%
<i>Specialty</i>		
General/Family practice	131.2	8.3
Internal Medicine	185.7	6.2
Surgery	269.4	5.6
Pediatrics	140.5	11.3
Obstetrics/Gynecology	244.3	21.9
Radiology	244.4	2.9
Psychiatry	137.3	6.8
Anesthesiology	215.1	-1.4
Pathology	209.4	14.7
Other	188.5	19.2
<i>Employment Status</i>		
Self-employed	230.8	9.8
Employee	152.6	3.0
Independent Contractor	155.5	-7.7
<i>Census Region</i>		
Northeast	192.7	12.6
North Central	194.8	2.9
South	203.7	5.7
West	187.0	8.3

Source: AMA Socioeconomic Monitoring System 1995 and 1996 core surveys of nonfederal patient care physicians excluding residents.

AMS Newsmakers

1996-97 Scholarships Awarded to Medical Students at the University of Arkansas College of Medicine



Joseph Rose (pictured on the left), a junior medical student of Springdale, is the recipient of the Class of 1945 Alumni Scholarship. Pictured on right is Dr. David B. Cheairs of Little Rock.



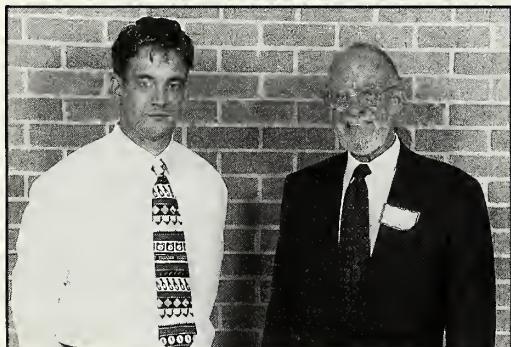
Doug Dannaway (pictured on the left), a medical student of Little Rock, has been awarded the Harold Braswell Memorial Scholarship. Pictured on right is Dr. Richard Wheeler, Assoc. Dean.



Jody Peebles (pictured on the left) of Augusta, a senior medical student, has been awarded the Dean's Achievement Scholarship. Pictured on the right is Dr. Dodd Wilson, Dean.



Kay Kinneman (pictured on the right), a junior medical student of Little Rock, is the inaugural recipient of the Class of 1946 Alumni Scholarship. Pictured on the left is Dr. Jim Doherty.



Andrew Martine (pictured on the left), a sophomore medical student, is the recipient of the Robert and Dorothy Bowling Scholarship. Pictured to the right is Dr. Robert Bowling.



Jody Barboza (pictured on the left), a junior medical student of Little Rock, has been named the recipient of the Class of 1979 Alumni Scholarship. Pictured on the right is Dr. Janet Udouj.



Drew Finkbeiner (pictured on the right), a sophomore medical student of Little Rock, has been awarded the inaugural Class of 1956 Scholarship. Pictured on left is Dr. Arlee E. Pollard.



Huda Sharaf (pictured in the middle), a senior medical student of North Little Rock, was awarded the Class of 1968 - Dr. A.J. Thompson Memorial Scholarship. Pictured on the far left is Dr. Jack Blackshear and on the far right is Mrs. Bobbie Blackshear.



Medical students Robert Cullen of Ft. Smith, Jon Fuller of Little Rock and Tom Van Hook of Pine Bluff have been named recipients of Southern Medical Association (SMA) Scholarships. Pictured from left to right are Tom Van Hook; Robert Cullen; Dr. Michael Mackey, SMA's Councilor for Arkansas; and Jon Fuller.



Nine medical students have been selected by the Arkansas Medical Society Alliance to receive national American Medical Association Education and Research Foundation Scholarships. Pictured in the front row from left to right are Melanie Hoover, senior of Pine Bluff; Megan Strother, junior of Mountain Home; and Lila Pappas, senior of Texarkana. Back row left to right are Mrs. Cathy Mackey, representing the AMS Alliance; Lolita Palmer, freshman of Little Rock; Wes Thomas, junior of Fayetteville; David Oberste, freshman of Little Rock; William McDonnell, sophomore of Hot Springs; and Eric Russell, sophomore of Bryant.



Four senior medical students have been awarded an Ilse F. Oates Scholarship funded by contributions of the Arkansas Medical Society Alliance (AMSA) county chapters. Pictured from left to right are Jody Bynum of Dermott; Chad Braden of Camden; Mrs. Barbi Pierce of the AMSA; Dr. Reid Pierce; Dichelle Engelkes of Warren; and Elizabeth Nelson of Carlisle.

Continued on next page...

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Seven senior medical students have been named recipients of Barton Scholarships. Pictured left to right are Pete Ball, Johnson; Mai Sharaf, North Little Rock; Ward Gardner, Little Rock; Jeri Hoskyn, Little Rock; Chris Hults, Augusta; Julie Harris, Little Rock; and Benton Brown, Manila.



Junior medical students awarded Barton Foundation Scholarships are, seated left to right, Amy Wiedower, Greenbriar; Amy Martin, Little Rock; Ruth Reardon, North Little Rock; and Kay Kinneman, Little Rock. Standing left to right are Anthony Williamson, Little Rock; Eric Parker, Fayetteville; Joseph Rose, Springdale; Jacob Kaler, Hot Springs; Michael Griffey, Fayetteville; and Jeri Mendelson, Little Rock.



Sophomore medical students named as recipients of Barton Scholarships are, seated left to right, Victoria Major, Conway; Christine Speer, Stuttgart; Shraddha Shrestha, Camden; D'Andra Bingham, DeQueen; and Missy Clifton, Dardanelle. Standing left and right are Matt Coker, Fayetteville; Tommy Taylor, Mammoth Spring; Ron Owens, Hot Springs; Stacey Klutts, Mountain Home; Cody Grammer, Fayetteville; and Charles Hanby, Springdale.

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New Member Profile

Deanna Nicholson Ruddell, M.D.



PROFESSIONAL INFORMATION

Specialty: Allergy-Immunology

Years in Practice: Started August 15, 1996

Office: Little Rock

Medical School: UAMS, 1991

Internship/Residency: UAMS, Arkansas Children's Hospital, 1992/1994

Fellowship: Medical College of Georgia, 1996

Professional Affiliates: American Academy of Pediatrics; American College of Allergy, Asthma and Immunology; and American Academy of Allergy, Asthma and Immunology

Honors/Awards: Phi Beta Kappa Honor Society, 1987; and Foundation for Fellows in Asthma Research 1994 grant recipient for "Management of Atopic Asthma: Effectiveness of Allergen Control"

PERSONAL INFORMATION

Date/Place of Birth: November 3, 1964, in Newport, Arkansas

Spouse: John H. Ruddell, engineer at Garver & Garver in Little Rock

Children: daughter, Rachel Ashley Ruddell, 7 months old

Hobbies: Water skiing, walking and tennis

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: A tennis instructor

Worst habit: Impatience

Best habit: Organization

Favorite junk food: Anything chocolate

People who knew me in medical school, thought I was: Quiet

The turning point of my life was when: Rachel was born

Nobody knows I: Was Delta Delta Delta Sorority president at the University of Arkansas in 1986-87

Favorite vacation spot: Charleston, South Carolina

One goal I haven't achieved, yet: Learning how to use a computer without my husband's help

One goal I am proud to have reached: Finishing my training in pediatrics & allergy-immunology

When I was a child, I wanted to grow up to be: A doctor

One of my pet peeves: Procrastination

First job: USTA tennis instructor

Worst job: Filing medical records

One word to sum me up: Honest

If you would like to appear in *New Member Profile* or *Member Profile*, contact Tina Wade at AMS at (501) 224-8967 or 1-800-542-1058.

10 Questions for Your Home Care Provider

Choosing a home health care provider can be one of the hardest, most important decisions you can make. Here are some questions you should ask first.

Finding a home health care provider best suited to your needs takes some research, but it's time well spent. Before making a decision, it's smart to interview several agencies and ask them a few important questions. Fortunately, most communities have a variety of home care providers from which to choose. Your physician or hospital discharge planner can help you locate providers in your area. Remember, you always have a choice in who provides your care.

The following questions can help you determine which provider is best for you or your loved one. Use them to help get the finest care.

- 1. How long have you been serving the community?**
- 2. Are you Medicare certified, licensed and accredited to provide home care? For which services and by which organizations?**
- 3. Do you supply literature outlining your services, eligibility requirements, fees and funding sources?**
- 4. How do you select and train your employees? Are supervisors assigned to oversee your employees and the quality of care they provide?**
- 5. Do you include the patient and family members in developing a plan of care? Is the plan documented, detailing the tasks to be carried out by each professional caregiver?**
- 6. Do you educate family members on the care being provided?**
- 7. What are your financial procedures? Do you provide written statements explaining all costs and payment plan options?**
- 8. What procedures do you have in place to handle emergencies?**
- 9. How do you ensure patient confidentiality?**
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Socioeconomic Status, Race and Life Expectancy in Arkansas, 1970-1990

David A. Swanson, Ph.D.*

Mary A. McGehee, M.A.**

Abstract

Earlier research found that high socioeconomic populations in Arkansas experienced an increase in mean life expectancy over low socioeconomic populations between 1970 and 1990. The possibility that these findings are spurious because of race is tested in this paper. Using multivariate analysis in conjunction with estimates of life expectancy by race and socioeconomic status (SES) we find that between 1970 and 1990: (1) Black populations with high SES gained more than three additional years of life expectancy over Black populations with low SES; and (2) White populations with high SES gained more than .5 years of life expectancy over White populations with low SES. These findings support earlier findings that SES plays an instrumental role in differential life expectancy. They also suggest that the effects of SES on life expectancy are moderated differentially for Blacks and Whites.

Introduction

Significant socioeconomic (SES) effects on changes in life expectancy at birth were found by Swanson for Arkansas between 1970 and 1990.¹ Specifically, high SES populations were found to have obtained increased life expectancy relative to low SES populations. These findings were in accordance with those reported elsewhere and it was argued that declining relative standards of living for the lower middle and lower SES populations along with national policies and transformations in the delivery of healthcare subsequent to 1970 contributed to this finding. However, it may be the case that these findings are spurious because of

race. Blacks, who have lower life expectancy than Whites at national and state levels also tend to have lower SES, on average, than Whites.^{2,3} In this paper, we examine the possibility that the SES effects found earlier were spurious by comparing life expectancy changes between 1970 and 1990 for high and low SES populations separately by race. If no significant SES difference exists separately for Blacks and Whites then the earlier argument concerning SES effects would be fallacious. If, however, an SES differential persists for Blacks and Whites separately, the earlier finding would be supported.

Methods And Data

For the same reasons described in the earlier paper by Swanson, we use a regression-based technique to estimate life expectancy.⁴ The model used is:

$$e_0 = \{82.276 - (4.24^*CDR) + (3.02^*\ln(P65+)) + (.0267^*CDR^2) \\ + (.1773^*\ln(P65+)^2) + (.8707^*[(CDR)^*(\ln(P65+))])\}$$

e_0 is life expectancy at birth

CDR is the Crude Death Rate

$\ln(P65+)$ is the natural base logarithm of the percent of the population aged 65 years and over

As was the case in the earlier study the analytical unit is a county population, although we divide these populations by race, White and Black. Likewise, data needed to estimate life expectancy by race and county were taken from vital statistics reports and census reports for 1970 and 1990, respectively.^{5,6} County populations by race are grouped into two sets for 1970 and 1990: (1) high SES, the 1st quintile, the 20% of the state's counties with the lowest percent of persons in poverty, by race; and (2) low SES, the 5th quintile, the 20% of the state's counties with the highest percent of persons in poverty, by race. For whites, all 75 counties

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**Table 1. Life Expectancy For 1970 County Populations
By Race/SES Group**

Low SES Populations*		High SES Populations*	
Black	White	Black	White
Woodruff (71)	Stone(75)	Pulaski(66)	Howard(73)
Monroe(71)	Newton(73)	Dallas(74)	Miller(71)
Chicot(74)	Fulton(77)	Hot Spring(68)	Washington(73)
Phillips(71)	Searcy(76)	Faulkner(70)	Phillips(73)
Poinsett(76)	Perry(70)	Miller(65)	Little River(74)
Crittenden(69)	Cleburne(75)	Clark(72)	Faulkner(74)
Mississippi(67)	Clay(73)	White(72)	Quachita(71)
Desha(71)	Madison(69)	Howard(72)	Ashley(71)
	Van Buren(75)		Sebastian(73)
	Randolph(76)		Crittenden(70)
	Lawrence(73)		Union(72)
	Marion(77)		Saline(74)
	Montgomery(74)		Columbia(75)
	Scott(75)		Jefferson(71)
	Izard(72)		Pulaski(72)

* Each county is listed in descending order by percent of persons in poverty for the Race/SES group in question, with life expectancy at birth shown in parentheses.

in the state are used. Thus, the 1st quintile for Whites is comprised of the 15 counties with the lowest percent of White persons in poverty; and the 5th quintile for Whites is comprised of the 15 counties with the highest percent of White persons in poverty. Because of small numbers, only 40 of the state's 75 counties are used for the Black population. Thus, the 1st quintile for Blacks is comprised of the 8 counties with the lowest percent of Black persons in poverty; and the 5th quintile for Blacks is comprised of the 8 counties with the highest percent of Black persons in poverty.

To measure change in life expectancy between 1970 and 1990 we construct a dummy variable regression model for each of the four race/SES groups:

$$e_0 \text{ 1990} = a + b(Yr)$$

$e_0 \text{ 1990}$ is life expectancy in 1990 for a given/race/SES group as found from the equation shown above

a is the mean life expectancy for the same race/SES group in 1970 as found from the equation shown above

b is the change in life expectancy between 1970 and 1990 for the race/SES group in question

YR is a dummy variable for year ($YR=0$, in 1970; $YR=1$, in 1990)

The one-tailed test ($p=.05$) is applied to the slope coefficient, b , in each of the four equations to determine if there is a statistically significant change in life expectancy for the race/SES group in question between 1970 and 1990. Because there is a positive correlation between life expectancy for a given race/SES group in

1970 and 1990, the standard error is diminished. However, this effect is mediated by the extremely small sample sizes and the net result is that a given t-test is not highly subject to a Type I error (rejecting a true null hypothesis). The null hypothesis is that there is no change (i.e., $b=0$); the alternative hypothesis is that there is positive change (i.e., $b > 0$). This test structure is appropriate because there is evidence to indicate that, on average, life expectancy increased between 1970 and 1990¹. If a given slope coefficient is found to be statistically significant then we reject the null hypothesis that $b=0$ and assume the value of b found in the equation represents the amount of change in life expectancy that occurred for the race/SES group in question between 1970 and 1990. If a given slope coefficient is not found to be statisti-

cally significant, then we do not reject the null hypothesis and assume that the value of b is zero - there was no change in life expectancy for the group in question between 1970 and 1990.

Results and Discussion

The estimated life expectancy values for each of the four race/SES groups in 1970, by county, are given in Table 1. The corresponding 1990 life expectancy values are found in Table 2. Table 3 provides the four dummy variable regression equations that were constructed using the life expectancy values in tables 1 and 2. The dummy variable regression equations clearly show that within each of the two racial groups, high SES populations posted relative gains in life expectancy over low SES populations between 1970 and 1990. For Whites, the high SES populations gained, on average, 2.96 years in life expectancy while the low SES white populations gained on average only 2.28. For Blacks, the high SES populations gained, on average, 3.42 years of life expectancy between 1970 and 1990 while the low SES populations showed no gain, on average, and, in fact, may have lost years.

In general, the results reported here suggest that that the findings reported earlier were not spurious and that high SES populations experienced relative gains in life expectancy over low SES populations, not only overall, but by race. However, it also appears that the impact of low SES is different for Whites and Blacks. Low SES White populations appeared to have gained additional years of life expectancy between 1970 and 1990, although not as much as either the high SES White or the high SES Black populations. For the low

SES Black population, however, there appears to be no increase whatsoever in life expectancy during this same twenty-year period.

Acknowledgment

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**Table 2. Life Expectancy For 1990 County Populations
By Race/SES Group**

Low SES Populations*		High SES Populations*	
Black	White	Black	White
Lee(72)	Searcy(76)	Hot Spring(71)	Faulkner(76)
Lafayette(70)	Newton(78)	Little River(75)	Lonoke(75)
Phillips(68)	Fulton(78)	Calhoun(71)	Dallas(76)
Chicot(73)	Stone(77)	Craighead(77)	Ashley(74)
St. Francis(71)	Lawrence(76)	Pulaski(71)	Union(75)
Woodruff(70)	Lee(73)	Sebastian(79)	Sebastian(75)
Desha(71)	Woodruff(73)	Conway(70)	Columbia(76)
Monroe(68)	Montgomery(77)	Faulkner(74)	Jefferson(74)
	Poinsett(73)		Quachita(75)
	Jackson(75)		Calhoun(74)
	Van Buren(80)		Nevada(75)
	Monroe(76)		Crittenden(76)
	Sharp(80)		Benton(78)
	Scott(76)		Saline(76)
	Clay(75)		Pulaski(75)

* Each county is listed in descending order by percent of persons in poverty for the Race/SES group in question, with life expectancy at birth shown in parentheses.

Table 3. Dummy Regression and Statistical Test Results: Changes in Life Expectancy, By Race/SES Group, Between 1970 and 1990

	a	b	standard error of b	t value (b=0)	P(b=0)	Decision Ho: b=0
Black						
High SES	70.04	3.42	1.58	2.17	.048	reject Ho
adj. R ² = .20						
Low SES	71.14	-0.74	1.16	-0.63	.537	do not reject Ho
adj. R ² = .03						
White						
High SES	72.45	2.96	0.48	6.16	.00001	reject Ho
adj. R ² = .58						
Low SES	73.89	2.28	0.80	2.86	.0079	reject Ho
adj. R ² = .23						

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Physician Training for Specialist to Generalist Career Change

George M. Finley, M.D.*
Rebecca Hyatt, B.S., C.P.M.**

The end of calendar year 1996 marked a milestone in the lives and careers of two Arkansas physicians, Drs. George Garrett and Dan Moser. The board-certified specialists, in Obstetrics/Gynecology and Pathology, respectively, completed Family Practice Residency training at Area Health Education Center - Southwest, affiliated with the University of Arkansas for Medical Sciences, in Texarkana, Arkansas. Drs. Garrett and Moser are part of a small but growing number of physician specialists who are responding to the changing health care delivery system with mid-career changes and seeking appropriate training in family practice.

Background

Sky-high rates of increase in the cost of health care in the 1980s and early 1990s provided incentive to examine our health care delivery system and find ways to lower the rates of increase in health care costs. The healthcare challenge of the decade is to lower those costs while keeping the decrease in beneficial outcomes, technical quality, access, and service to the barest minimum.¹

One key to the cost containment effort is the gatekeeper role of the primary care provider who authorizes access to diagnostic services, referrals to specialists, emergency, and hospital care.¹ In the United States the ratio of specialists to generalists is approximately 2:1. Just the opposite is true in most industrialized nations. Often cited in medical policy reports are the shortage of primary care physicians, oversupply of medical and surgical subspecialists, and the lack of sufficient health care providers of any type in inner-city and rural areas of the United States.^{2,3}

Significant proposals have been recommended to



George Garrett, M.D.



Dan Moser, M.D.

change the maldistribution of physicians. In 1992, the Council on Graduate Medical Education recommended reform of graduate medical education such that at least 50% of the physicians trained in the U.S. would be generalists.⁴ This proposal was supported by the Physician Payment Review Commission, the American Academy of Family Physicians, the American College of Physicians, the Accreditation Council for Graduate Medical Education, and the Association of American Medical Colleges.⁵

However, the current medical education system, by itself, cannot solve the short-term need for physicians. If 70% of medical school graduates went into primary care, the 50:50 ratio would not be reached till the year 2020.⁶

The demand for primary care physicians is increasing proportionately to the spread of managed care and health maintenance organizations which depend on an adequate primary care workforce as the cornerstone of vertically integrated, cost-effective care. One short-term solution to this supply/demand dilemma is retraining the specialist or career change education.^{5,7}

National Overview

In 1966, a pilot project at the Pacific Medical Center in San Francisco was the first physician retraining program in the United States. It was a 6- to 12-month program and resembled a mini-internship. In 1969, a retraining program at the Medical College of Pennsylvania was designed to address retraining needs of

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Figure 1: Specialists Retraining in Family Practice in 4-State Region

State	#FP Residencies	Resident Positions 1995-96	Specialists Re-training since 1994
Arkansas	7	134	4
Oklahoma	6	128	1
Louisiana	7	95	1
Texas	25	616	6
TOTAL	45	973	12

Figure 2: Specialists Type Re-training

Specialty	Number
Anesthesiology	2
ER Medicine	1
OB/GYN	2
Oncology	1
Ophthalmology	1
Otorhinolaryngology	1
Pathology	3
Surgery	1

clinically inactive physicians who wished to return to clinical practice. The 9-month program was eventually reduced to 8 weeks.^{5,7}

In a 1993 survey of 46 California Managed Care Organizations to explore their interest in retraining specialists, 29 MCOs responded. Two were sponsoring retraining programs and seven were planning to initiate programs.⁸

One of the respondents, Sharp Health Care in San Diego, began retraining in 1994 at the request of its OB/GYNs. The 10-month part-time curriculum includes family medicine preceptorship and standardized patient assessments. Also in San Diego, the Mercy Physicians Medical Group initiated an eighteen-month part-time retraining program for its internal medicine subspecialists in 1993.^{8,9}

None of the programs named above are eligible for board certification in family practice.

A few medical schools offer retraining using existing programs, such as the College of Medicine at the University of Tennessee at Memphis. It's 15-year-old program is a 3-year residency leading to family practice certification. Six to eight physicians participate each year.⁹

Regional Survey

Neither the American Medical Association nor the American Academy of Family Practice have data on the number of specialists seeking Family Practice Residency training. A literature search did not produce that data either.

AHEC-SW staff conducted a telephone survey of all the family practice residency programs in our 4-state

area of Texas, Oklahoma, Arkansas, and Louisiana. (See Figures 1 & 2). Since 1994 the residencies have trained 12 specialists in family practice. Their specialties were varied. We think other regions of the country may have a higher rate of specialists in family practice training due to the fact that the 4 states in this survey are in the infancy stage of managed care health delivery and some other states are in more advanced stages. Nevertheless, the figures indicate only a small number of physicians have opted to obtain generalist training in a family practice residency.

Two Physicians' Experiences with Re-Training

Drs. George Garrett and Dan Moser were interviewed regarding their decision to enter a family practice residency training program, their experience, and their perspective at the end of the training period.

Dr. Moser completed medical school at the University of Texas Southwest Medical School in Dallas, a one-year internship in Internal Medicine at the University of Arkansas for Medical Sciences, and became board-certified in pathology in 1974. He was appointed Director of Pathology at Wadley Regional Medical Center in Texarkana in 1975. More recently he worked as locum tenens for other pathologists in Texas and Arkansas. In 1992, he recognized that the health care delivery environment was changing and that he needed to re-direct his efforts. The AHEC-SW residency program began in July 1993 and correlated with his interest in making a career change. Dr. Moser said he had always enjoyed seeing patients, and he was encouraged by the AHEC Director, faculty, and residents to enter the program. He was accepted and given six months credit.

In retrospect, Dr. Moser is glad he made the decision to retrain. He would not underestimate the stress and strain of residency training, especially the first year. He had to adjust to carrying a beeper and working long hours. He said the younger residents' enthusiasm helped him to keep his goal alive and his interaction with them added a sparkle to the process.

Dr. Moser would recommend family practice training to specialists if the physician's health is good; he/she really *wants* to do it; and he/she really enjoys patients. Dr. Moser said, with a grin, "I'd do it again, but I might think a little longer!"

Dr. Moser is being recruited by several entities and is in the process of deciding which one he will accept.

Dr. Garrett completed medical school at the University of Arkansas for Medical Sciences and finished a residency in Obstetrics and Gynecology at Louisiana

State University. He maintained a private practice for 15 years in Hope, Arkansas (Population: 10,000) which is 30 miles from Texarkana.

Dr. Garrett said that it was difficult to maintain an OB practice in a small town, and when his partner left in 1991, it became even more difficult. He was already accustomed to some degree of family practice in his OB/GYN work and he always liked that aspect. Dr. Garrett said his family was very supportive of his decision to enter residency training and he could not have completed it without their support.

Dr. Garrett was given 12 months credit when he was accepted into the program. He also is glad that he completed the family practice training. His advice to specialists considering generalist training is to carefully think through his/her goals and be prepared to redirect his/her efforts.

Dr. Garrett expects to practice either in Hope or Texarkana or maybe both!

Conclusions

Market forces are already shifting physicians into primary care. An oversupply of medical and surgical specialists is a puzzling problem in U.S. health care today.¹⁰ Programs for retraining specialists as primary care physicians are warranted and the demand for such programs is likely to increase. New models for retraining

are in their early stages, but at present, residency training remains the standard for primary care competence.

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J. Kelley Avery, M.D.*

Case Report

A 17-year-old boy who had been autistic since birth and who had a lifelong history of seizures that proved very difficult to control had been followed all his life by the same physician, with frequent help from a neurologist who had also been involved with the patient for a long time. Even with maintenance anti-seizure medication using combination therapy, seizure activity occasionally required IV sedation to interrupt the attack.

During an unwitnessed seizure, the patient apparently fell and was in considerable pain. The emergency medical service was notified, and on the initial evaluation before transport found reflexes in the extremities to be "positive," but the patient would grimace and moan when moved. He was therefore transported on a backboard with a cervical collar and a chin immobilizer. He was seen in the emergency department (ED) by his regular primary care physician who, after a difficult evaluation, concluded that there were no apparent focal neurologic deficits but that there was evidence of significant and unlocalized discomfort in the patient's neck.

X-rays of the spine were ordered, and both lumbar and cervical films were viewed by the radiologist and the attending physician. The radiologist reported that the films were negative. The mother was given extensive instructions on the care of her son and advised to return to the ED or to the physician's office for reevaluation at any time. The attending physician did document in his office record that he received a phone call from the mother two hours after the patient's discharge from the ED informing him that the patient had had two seizures before leaving the ED and three

more after arriving home. Again, the mother was advised to bring the patient in for reevaluation, but she declined because she could see no change in her son's condition after the seizures. It is well to note that the mother had taken care of this patient for his entire life and consequently must have become accustomed to all kinds of unexpected behavior.

The following morning, on routine review of the films taken at night in the ED, the senior radiologist reported that the films were non-diagnostic because there was no visualization of C-7 on any of the views. Before this report could be acted upon by the attending physician, the patient was brought to the ED about noon, unable to move his lower extremities, and having not urinated since the last seizure the night before. The presumptive diagnosis at this point was spinal cord injury, and the patient was transferred to the care of a neurosurgeon in the medical center.

On CT scanning of the neck no fracture was seen, but there was a "2mm" forward subluxation of C-7 on T-1. An emergency exploration of this area with a posterior spinal fusion was done, and after a prolonged and complicated hospitalization, the patient was transferred to a long-term care facility because continued care at home was not possible.

Because of the very serious injury and the devastating neurologic deficit, a multi-million dollar lawsuit was filed, charging both the attending physician and the radiologist with negligence in "carelessly" failing to clear the cervical spine and "carelessly" failing to get appropriate consultations. The attending physician was charged with "carelessly" failing to admit the patient to the hospital for observation and appropriate monitoring during the night.

Loss Prevention Comments

Failure to adequately evaluate the cervical spine after trauma of any kind is one of those claims almost

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association*. It is reprinted here with permission.

automatically considered medical malpractice when a less-than-desirable outcome follows; in addition, spinal cord injuries that result in a significant neurologic deficit are among the most expensive. Lifelong care is necessitated by the deficit and usually must be carried out in a long-term facility of some kind, with the participation of various paramedical disciplines.

Although there were obvious problems in defending this suit, e.g., the failure to get x-ray views of the entire cervical spine, there were circumstances that should have mitigated the damages to some degree. The seizures, which were in all probability responsible to some degree for the neurologic damage, were not the fault of the physicians involved. The mother's failure to avail herself of the offered reevaluation after the post-discharge seizures occurred was not the fault of the physicians. The attending physician had given the mother good detailed instructions in the care of the patient, and had described in detail the signs to look for that would indicate the need for reevaluation. There was the prompt review of the films in the radiology department, which had discovered the error. Much time and compassionate concern had been invested by the attending physician in the evaluation of his patient. Nobody is perfect! This is generally understood by a jury when this kind of prompt discovery of the error is in evidence.

One thing in this case, however, made the dangers of trial too great to consider. The physicians blamed each other for the outcome. This injury was serious, the evaluation of the injury was less than perfect, there was great sympathy for this unfortunate patient and his mother, and the monetary damages were calculated to be in seven figures. Nonetheless, not even all this made this case demand settlement. When physicians blame each other in such a situation, where each has some obvious responsibility, we lose everything we have going for us. The settlement required here was almost in the seven-figure range. The lessons? *View all the vertebrae! Don't blame each other!*

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Cardiology Commentary and Update

J. David Talley, M.D.*

Vascular Health: The Emerging Appreciation of the Endothelium

Advances in basic and clinical investigation point to the endothelium as a link between pathological processes and clinical events in the pathogenesis of acute ischemic coronary syndromes. Diagnostic methods have been refined to evaluate endothelial function. Acetylcholine infused directly into a normal coronary artery causes vasodilatation. Failure to dilate or "paradoxical vasoconstriction" is seen with acetylcholine infused into atherosclerotic arteries. Promising therapies for restoring proper endothelial function include the use of 3-Hydroxy-3-MethylGlutarylCoenzyme A (HMG Co-A) reductase inhibitors and Angiotensin-Converting Enzyme (ACE) inhibitors.

HMG Co-A Reductase Inhibitors. Dietary and pharmacological therapy aimed to treat dyslipidemia have been subjected to detailed angiographic analysis. These trials have shown that lipid lowering therapy may slow atherosclerotic progression and in some patients may actually promote regression.¹ However, these angiographic studies show that the effect on plaque volume is minimal, with only a 2 - 5% decrease in plaque size (Figure 1). Nonetheless, these apparently insignificant angiographic changes are accompanied by dramatic reduction in the incidence of clinical coronary syndromes. This reduction in acute coronary syndromes is out of proportion to the degree of regression and raises the question as to the mechanism of action.

HMG-CoA reductase inhibitors effectively reduce plasma cholesterol levels by interfering with the rate-limiting step in the cholesterol biosynthetic pathway.² Landmark primary and secondary prevention trials using HMG-CoA reductase inhibitors show that reducing low density lipoprotein (LDL) decreases cardiovascular deaths and mortality of all causes.^{3,4} This improved clinical outcome may be due to restoration

of normal endothelial function.^{5,6}

HMG-CoA reductase inhibitors have become progressively more potent in their ability to reduce LDL. The enhanced potency is related to tissue specificity, onset of action, longer half-life, and activity of metabolites. These agents may possess unique properties related to their ability to alter hematological parameters, adhesion molecules, and non-lipid parameters such as plasma viscosity. Clinical trials are on the drawing board to determine the additional benefit of these agents compared to standard medical management for unstable angina pectoris. Interestingly, two clinical trials, AVERT (Atorvastatin Vs. rERascularization Trial) and SMART (Specialized Medication And Revascularization Therapy) have been designed to compare the efficacy of reductase inhibitors in patients treated with medical management alone compared to those treated with medical management and percutaneous transluminal coronary angioplasty.

ACE Inhibitors. An intriguing finding from the Survival and Ventricular Enlargement (SAVE) and Studies of Left Ventricular Dysfunction (SOLVD) trials was the unanticipated result of fewer ischemic events and the need for revascularization procedures in patients who received an ACE inhibitor.⁷ The mechanism for this reduction was evaluated in the Trial on Reversing Endothelial Dysfunction (TREND) study. In normal endothelium, tissue ACE and other components of the reninangiotensin system mediate vasoconstriction counterbalanced by nitric oxide which causes vasodilatation. Endothelium damaged by atherosclerosis loses its ability to vasodilate leading to unopposed vasoconstriction. Quinapril (Parke-Davis, Morris Plains, NJ, USA) is a new ACE inhibitor with high binding affinity to tissue ACE, and therefore offers the theoretical promise of restoring "balanced" endothelial vasoactivity by inhibiting the vasoconstrictive effects of tissue

* Dr. Talley is with the Division of Cardiology, Department of Internal Medicine, UAMS Medical Center.

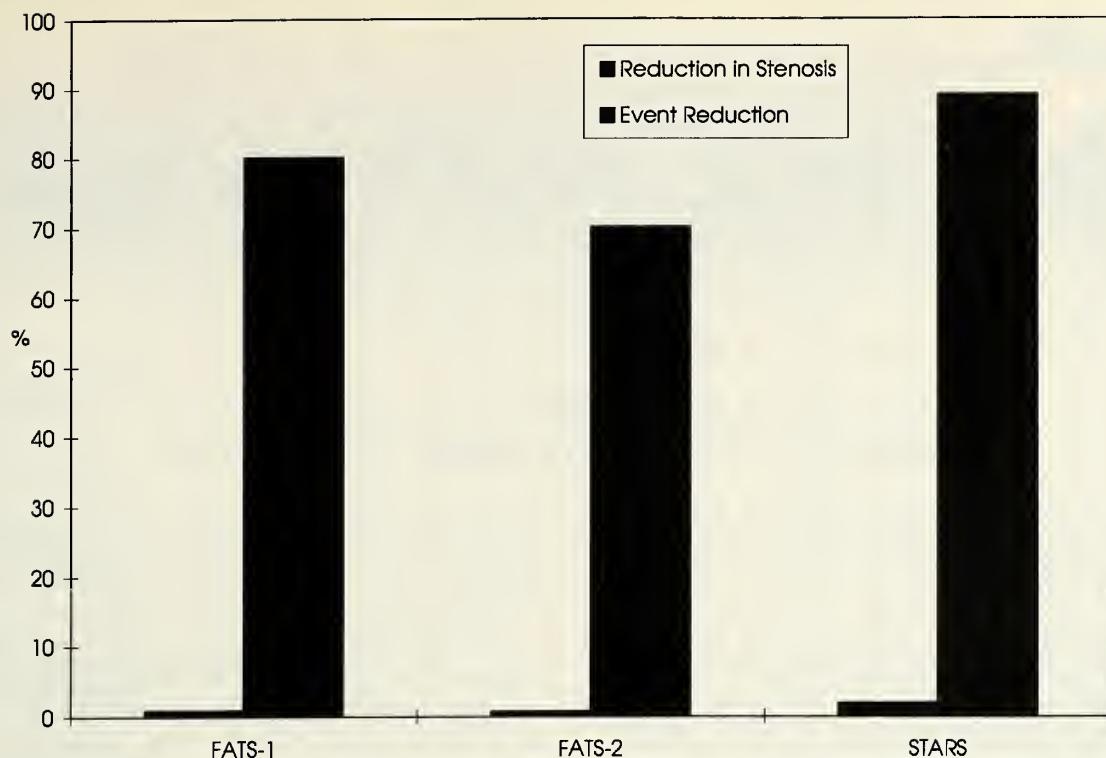


Figure 1: There is a marked discrepancy between the degree of angiographic regression in various trials and the marked reduction in clinical events with the use of lipid lowering agents. This finding suggests that the endothelium plays a vital role in reversing endothelial dysfunction.

Abbreviations: FATS-1 = Familial Atherosclerosis Treatment Study (nicotinic acid + colestipol); FATS-2 = Familial Atherosclerosis Treatment Study (lovastatin + colestipol); STARS = St. Thomas' Atherosclerosis Regression Trial (diet + resin)

ACE. The TREND study showed that quinapril reversed endothelial dysfunction.⁸ Two studies are currently ongoing to determine if this angiographically documented finding leads to an improvement in clinical outcome. The Quinapril Antiischemia and Symptoms of Angina Reduction (QUASAR) trial is a double-blind, placebo-controlled trial of 350 patients with a primary endpoint of the number and duration of ischemic episodes on 48 hour ambulatory electrocardiogram. The Quinapril Ischemic Event Trial (QUIET) study, in progress for several years now, is a double-blind, placebo-controlled trial which will evaluate the occurrence of clinical ischemia. There are several additional trials of ACE inhibitors for treatment of coronary artery disease in patients with normal left ventricular systolic function.⁹

The finding that endothelial dysfunction can be reversed using HMG-CoA reductase inhibitors and ACE inhibitors point to the key role of mediators in regulating vascular health. It remains to be defined if these angiographic findings are linked to improved clinical outcome.

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

The American Public Health Association Calls for Curtailment of PVC Use in Health Care Facilities

At the November annual meeting of the American Public Health Association (APHA), a resolution was passed that called for health care facilities to cut back and eventually eliminate the use of polyvinyl chloride(PVC) plastic. PVC makes up about 25% of the hospital plastics stream predominately in the form of blood bags. The resolution is a response to the continued concerns about dioxin formation and release when hard plastics are incinerated. The resolution cites the EPA *Dioxin Reassessment* which states that medical waste disposal is a major source of dioxin contamination. The resolution also cited an earlier APHA resolution that stated that virtually all chlorinated organic compounds exhibit at least one of a wide range of serious toxic effects. The resolution was originated by Peter Orris an M.D. and professor of occupational medicine at the University of Illinois, Chicago. Dr. Orris is also a member of the group, Physicians for Social Responsibility.

The resolution urges all health care facilities and health care professionals to explore ways to reduce or eliminate their use of PVC plastics. It urges medical suppliers to develop, produce, and bring to market appropriate, cost-competitive products that can replace those that contain PVC or other chlorinated plastics.

The resolution also encourages government oversight agencies and private accrediting bodies to incorporate requirements in their certification standards for health care institutions to reduce toxic pollutants.

The resolution is very controversial and has drawn criticism from the plastic industry and the American Hospital Association. Both contend that the resolution would result in little to no decrease in dioxin emissions while significantly increasing health costs. They also contend that the proposal is based on outdated EPA data. EPA has recently revised its estimate of dioxin emissions from medical waste incinerators and the incinerators are not now considered to be a primary source of dioxin in the environment. The American Society of Engineers conducted a study which concluded that there is no link between the amount of chlorinated plastics burned to the amount of dioxin produced. The Vinyl Institute stated that the resolution was not grounded in science and would not do anything for the environment. The critics summarized that instead of pinpointing PVC as the problem, APHA should focus on encouraging practices that reduce regulated medical waste production in hospitals through improved medical waste management.

Influenza Update

Arkansas - Through early January 1997, the Arkansas Department of Health (ADH) has obtained eight positive influenza cultures from Arkansas, Garland, Greene and Pulaski counties. All are type A (subtype unknown). To date, there have been no reports of influenza outbreaks in Arkansas.

United States - For the week ending December 28, 1996, influenza activity, as assessed by state and territorial epidemiologists, was reported as widespread in 17 states. Regional activity was reported in 16 states and twelve states, including Arkansas, reported sporadic

activity. Five states did not report.

From September 15 through December 28, 1996, the U.S. World Health Organization's collaborating laboratories tested 14,893 specimens for respiratory viruses and 2,266 (15%) have been positive for influenza. Of these, 2,237 (99%) were identified as influenza type A and 29 (1%) as influenza type B.

For more information on influenza or to report outbreaks, call the ADH Division of Communicable Disease & Immunization at (501)661-2784 or the Communicable Disease Reporting System at (800)482-8888.

Reported Cases of Selected Diseases in Arkansas

Profile for November 1996

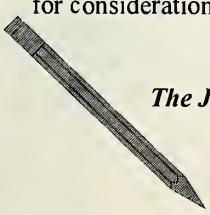
The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Nov. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1996	Total Reported Cases 1995	Total Reported Cases YTD 1994	Total Reported Cases 1994
Campylobacteriosis	16	229	140	153	175	187
Giardiasis	13	163	125	131	115	126
Shigellosis	38	156	130	176	182	193
Salmonellosis	27	432	317	332	517	534
Hepatitis A	47	474	599	663	242	253
Hepatitis B	4	75	72	83	53	60
HIB	0	0	6	6	5	5
Meningococcal Infections	2	31	33	39	49	55
Viral Meningitis	2	32	32	31	61	62
Lyme Disease	0	25	11	11	15	15
Rocky Mountain Spotted Fever	1	22	31	31	18	18
Tularemia	0	19	20	22	22	23
Measles	0	0	2	2	1	5
Mumps	0	1	6	5	6	7
Gonorrhea	355	4724	5502	5437	6479	7078
Syphilis	46	691	980	1017	1005	1096
Legionellosis	0	1	6	5	15	16
Pertussis	0	10	59	59	33	33
Tuberculosis	18	183	212	271	223	264

For a listing of reportable diseases in Arkansas, call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893 during normal business hours.

Do the "Write" Thing!

We're always looking for interesting and informative articles for *The Journal*. If you have a topic that you think would be of interest to your peers, please submit it for consideration to:


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New Members

DARDANELLE

Hartman, Ray, General Surgery. Medical Education, Dalhousie, Halifax, Nova Scotia, 1984. Internship, Dalhousie, 1985.

FORT SMITH

Haraway, Stuart D., Obstetrics/Gynecology. Medical Education, University of Oklahoma, Oklahoma City, 1989. Internship/Residency, Oklahoma Memorial Hospital, 1990/1993. Board certified.

Patrick, Donald Lee, Cardiovascular & Thoracic Surgery. Medical Education, University of Florida, Gainesville, 1966. Internship, Parkland Memorial Hospital, 1967. Residency, Mayo Clinic, 1971. Board certified.

HOT SPRINGS

Hardy, Ross Alan, Physical Medicine and Rehabilitation. Medical Education, UAMS, 1992. Internship/Residency, 1996.

JONESBORO

McClurkan, Michael Bruce, Obstetrics/Gynecology. Medical Education, UAMS, 1992. Internship/Residency, University of Mississippi Medical Center, 1993/1996.

LITTLE ROCK

Patrick, Larry L., Anesthesia. Medical Education, UAMS, 1977. Internship, University Hospital & VA Hospital, Little Rock, 1978. Residency, UAMS, 1980. Board certified.

Schrader, Nancy Lynn, Emergency Medicine. Medical Education, University of Tennessee, Memphis, 1987. Internship/Residency, UAMS, 1988/1990. Board certified.

RUSSELLVILLE

West, Boyce W., General Practice. Medical Education, UAMS, 1970. Internship, St. Vincent Infirmary, Little Rock.

SMACKOVER

Roper, Richard Kyle, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, UAMS, AHEC-El Dorado, 1994/1996. Board certified.

RESIDENTS

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Andhra Medical College/King George Hospital, India. Residency, Aultman & Timken Mercy Hospitals, Canton, Ohio. Fellowship, UAMS.

Lamb, Trent Robert, Family Medicine. Medical Education, UAMS, 1995. Internship/Residency, UAMS, AHEC-NE.

Schultz, Charles Edward, Internal Medicine/Neurology/Emergency. Medical Education, Medical College of Ohio at Toledo, 1992. Internship, Ohio State University, Columbus, 1993, Residency, Indiana University, 1996. Fellowship, Indiana University.

Tatum, Robert Erwin, Internal Medicine. Medical Education, University of Mississippi School of Medicine, Jackson, 1990. Internship/Residency, UAMS.

Young, Matthew Stephen, Emergency Medicine. Medical Education, UAMS, 1996. Residency, UAMS.

STUDENTS

Leigh Anne Bennett

Brian Curtis

Bryan Phillip Tygart

Michael N. Wiggins

Kelli Ruth Wilson

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The Arkansas Medical Society is a statewide organization that represents *ALL PHYSICIANS*, regardless of specialty, location or type of practice.

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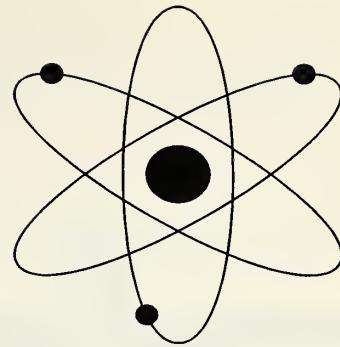
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Radiological Case of the Month

Steven R. Nokes, M.D., Editor

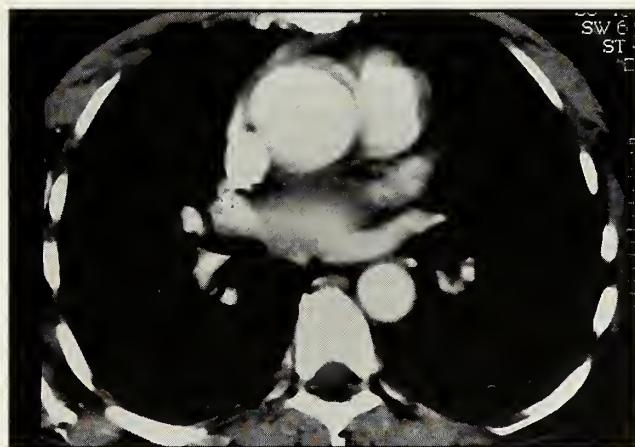
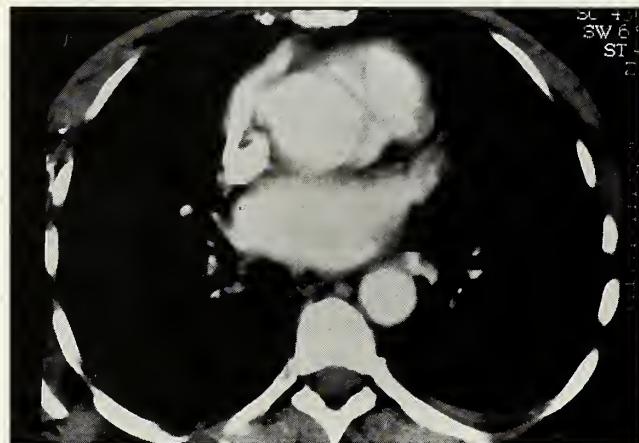
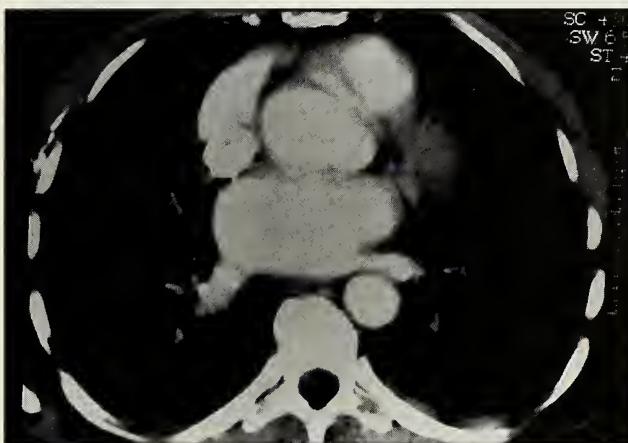
Authors

Steven R. Nokes, M.D.
James D. Holloway, M.D.
Thomas H. Hoffman, M.D.



History:

This 65-year-old female presented with tearing chest pain. A chest film was unremarkable. A spiral CT scan of the chest was performed (figures 1 a-c).



Figures:

Figure 1 (a-c). Axial contrast enhanced spiral CT scans at the level of the left atrium (both the ascending and descending aorta are seen).

Motion Artifact Simulating Aortic Dissection

Diagnosis: Motion artifact simulating aortic dissection.

Findings: The three images of the ascending aorta reveal a linear low density line simulating an intimal flap. The descending aorta is normal. Reconstructed images (Figure 2 a-b) using less than 360° reconstruction are normal.

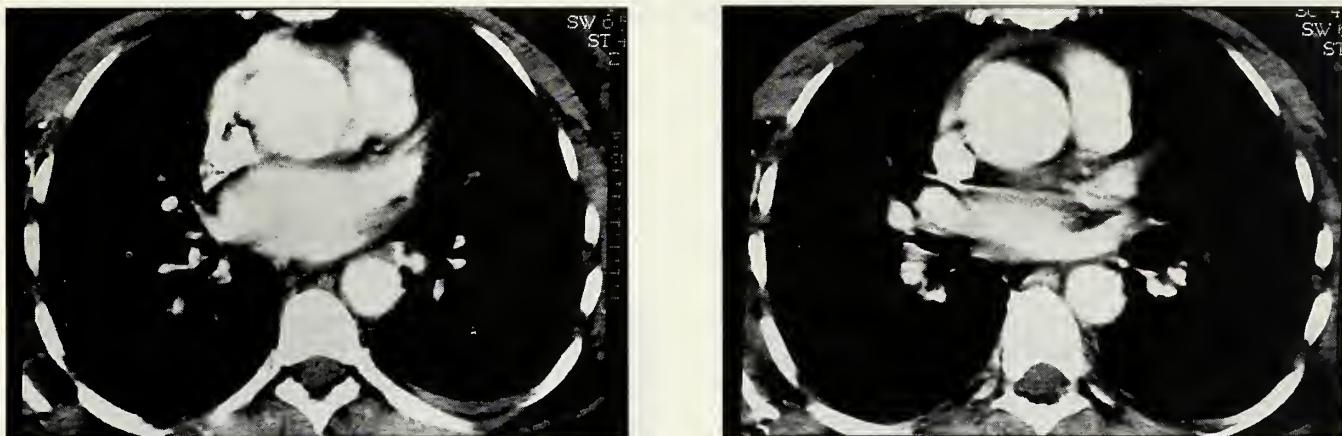


Figure 2 (a-b): Retrospective 180° reconstructions of two of the slices through the aortic root revealing a normal aorta.

Discussion: Acute aortic dissection is the most common emergency of the aorta. Untreated, the mortality is 25% in the first 24 hours, 70% during the first two weeks, and 90% after two weeks. Aortography once the mainstay of diagnosis is invasive and is less sensitive for the detection of dissection than was once thought (only 88% sensitive; 94% specific), and has been supplanted in the last decade by noninvasive techniques.

Spiral CT is probably the most widely used technique for the diagnosis of aortic dissection as it has been shown to be 100% sensitive and specific, is widely available, allows for accurate follow-up and is relatively operator independent. An intimal flap is considered diagnostic. Several important diagnostic pit falls may present difficulty in interpretation, however, including penetrating atherosclerotic ulcers, mural thrombi in fusiform aneurysms, periaortic soft tissue masses, apparent high attenuation of the aortic wall in anemia, and lastly artifacts. A common artifact, presented in our case, is the result of the improved speed of spiral CT scanners. The one second scan cycle results in a curvilinear artifact in the root of the aorta that simulates an intimal flap. The artifact is not vendor specific, and has been described on images obtained with General Electric, Siemens, and Imatron equipment. Our case was performed with an Elscint Twin CT. Aortic motion causes the artifact due to a difference in shape and position of the aortic root during systole and diastole. The artifact can be eliminated by reconstructing the data using a retrospective 180° rather than the routine 360° of information (figure 2 a and b). This requires the operator to save the raw data on all dissection studies.

Recognition of this artifact is vital to prevent incorrect diagnosis of a Stanford type A dissection (involving the ascending aorta) as all of these dissections require urgent surgery. Stanford type B (confined to the descending aorta) are generally treated medically. Surgical treatment is required for patients with treatment failure, progressive dissection with major branch occlusion or progressive dilatation of the false lumen with compression of the true lumen.

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3. Sommer T, Fehske W, Holzknecht N, et al. Aortic dissection: a comparative study of diagnosis with spiral CT, multiplanar transesophageal echocardiography, and MR imaging. Radiology 1996; 199:347-352.

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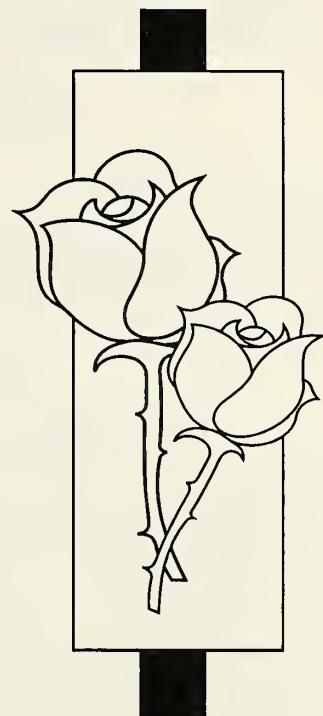
In Memoriam

Robert B. Benafield, M.D.

Dr. Robert B. Benafield of Conway died Monday, December 9, 1996. He was 64. He is survived by his wife, Helen Speaker Benafield; a son, Dr. Robert B. Benafield, Jr., of Atlanta, Ga.; two daughters, Leslie Ford and son-in-law Mike Ford, and Lenlie Freeman and son-in-law Karl Freeman, all of Conway; a sister, Wanda Harper of Hot Springs; a brother, J.W. "Buddy" Benafield of Little Rock; four grandchildren, Adam, Rachel and David Bryan Ford and Lauren Freeman, all of Conway.

Col. Eaton Wesley Bennett, M.D.

Col. Eaton Wesley Bennett, M.D. of Little Rock died Monday, December 9, 1996. He was 90. He is survived by his wife of 66 years, Louise Ogden Bennett; two daughters, Margaret Elder Cornett of Little Rock and Sylvia Ogden Danek of Albuquerque, N.M.; a son, James Oliver Bennett of Knoxville, Tenn.; a brother, John A. Bennett of Astor, Fla.; a sister, Blanche Christy of Midland, Texas; 12 grandchildren and 14 great-grandchildren.



Things To Come

March 6-8

47th Annual Surgical Forum. Sheraton Grande Hotel, Los Angeles, California. Sponsored by the Society of Graduate Surgeons. For more information, call (213) 937-5514.

March 7-9

Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Crowne Plaza Manhattan, New York City. Sponsored by the Center for Bio-Medical Communication, Inc., in collaboration with the American Foundation for AIDS Research. For more information, call (201) 385-8080.

March 21-25

North American Skull Base Society 8th Annual Meeting Combined with 2nd International Congress on the Cerebral Venous System 2nd International Congress on Meningiomas. The Excelsior Hotel, Little Rock, Arkansas. For more information, call (301) 654-6802.

March 24-26

NIH Consensus Development Conference: Management of Hepatitis C. Natcher Conference Center, National Institutes of Health, Bethesda, Maryland. Sponsored by the National Institutes of Health. For more information, call (301) 770-3153.

April 4-5

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 10-12

Refresher Course & Update in General Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 11-13

Infectious Disease 97: A Comprehensive Review for the Practicing Physician. Renaissance Washington D.C. Hotel - Downtown. Sponsored by the Center for Bio-Medical Communication, Inc. For more information, call (201) 385-8080.

April 17-20

National Kidney Foundation 6th Annual Spring Clinical Nephrology Meetings Consultative Nephrology Program. Wyndham Anatole Hotel, Dallas, Texas. For more information, call 1-800-622-9010.

April 25-27

1997 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Co-sponsored by the Alton Ochsner Medical Foundation and Tulane University School of Medicine. For more information, call (504) 842-3702 or 1-800-778-9353.

May 1-3

Arkansas Medical Society Annual Session - Scaling New Heights. Arlington Hotel, Hot Springs. For more information, call 1-800-542-1058 or 501-224-8967.

May 8-10

Ambulatory Surgery '97: Sharing Our Experiences FASA 23rd Annual Meeting. Marriott Copley Place Hotel, Boston, MA. For more information, call (703) 836-8808.

May 21-24

National Rural Health Association 20th Annual National Conference: Caring for the country...Partnerships for Health. Westin Hotel, Seattle, Washington. For more information, write to NRHA, One West Armour Boulevard, Suite 301, Kansas City, Missouri, 64111.

September 5-7

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

October 26-30

1997 State-of-the-Art Conference: Occupational and Environmental Medicine. Nashville, Tennessee. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (847) 228-6850, ext. 152.



**Arkansas Medical Society
1997 Annual Session
May 1-3, 1997**

SCALING NEW HEIGHTS

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Watch your mail for registration materials.

**The Arkansas Medical Society
Seeks Nominations
for the 1997 Shuffield Award**

The Arkansas Medical Society is seeking nominations for the 1997 Shuffield Award which will be presented at the annual meeting in Hot Springs, May 1 - 3, 1997.

The Shuffield Award is given each year to recognize lay persons in Arkansas who have done outstanding community work in the health care field. The individual might be a newspaper reporter, television personality, government official, teacher or individual promoting a community or other health

related program. The person cannot be a physician or member of a physician's immediate family.

The nominations may come from the county medical societies or any medical society or alliance member. The deadline for receipt of nominations is Friday, February 28, 1997. Past nominees may be renominated.

If you know someone worthy of this honor, please contact the AMS office at 501-224-8967 or 1-800-542-1058 for a nomination form.

Keeping Up

March 1, 1997

Southwest Arkansas Physician Update. Time: 8:30 a.m. - 3:30 p.m. Location: Lile Hall, Quachita Baptist University, Arkadelphia. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: To be determined. Fee: To be determined. For more information, call (501) 661-7962.

March 1, 1997

Diabetes Update. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn. Program presenters: UAMS Division of Endocrinology/Arkansas Diabetes Program Course Director: Dr. Vivian Fonseca. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: Before February 1, 1997, Physicians - \$75 and others - \$50; after February 1, 1997, Physicians - \$100 and others - \$60. For more information, call (501) 661-7962.

March 1, 1997

Diabetes Update. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn. Program presenters: UAMS Division of Endocrinology/Arkansas Diabetes Program Course Director: Dr. Vivian Fonseca. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: Before Feb. 1, 1997, Physicians-\$75 and others-\$50; after Feb. 1, 1997, Physicians-\$100 and others-\$60. For more information, call (501) 661-7962.

March 4, 1997

Obesity: Common Symptom of Diverse Gene-Based Metabolic Dysregulations. Time: 8:00 a.m. - 4:30 p.m. Location: Little Rock, Excelsior Hotel. Program presenters: UAMS and Biochemistry and Molecular Biology. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: 5.5. Fee: To be determined. For more information, call (501) 661-7962.

March 14-15, 1997

Neurology for the Primary Care Physician. Time: 8:00 a.m. - 4:00 p.m. Location: Little Rock, Hilton Inn Select. Program presenters: UAMS Department of Neurology. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: To be determined. Fee: \$150 for Physicians. For more information, call (501) 661-7962.



Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

*General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3*

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

*Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.*

LITTLE ROCK-BAPTIST MEDICAL CENTER

*Breast Conference, 3rd Thursday, 7:00 a.m., J.A. Gilbreath Conference Center, Room #20
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Disorders Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.*

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

*Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom*

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

*Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom*

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

*ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
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VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118*

VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142

White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital



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Volume 93 Number 10

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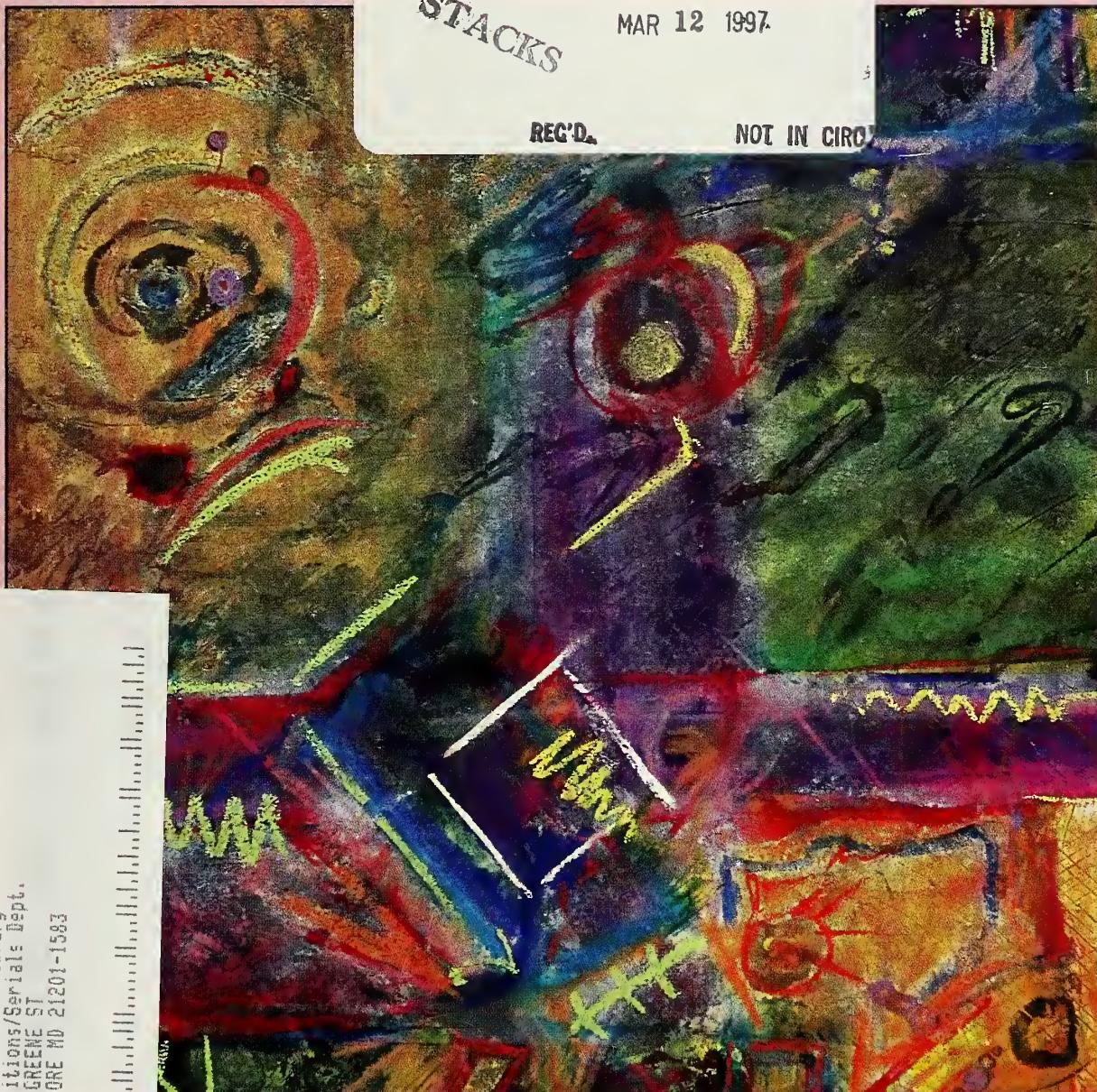
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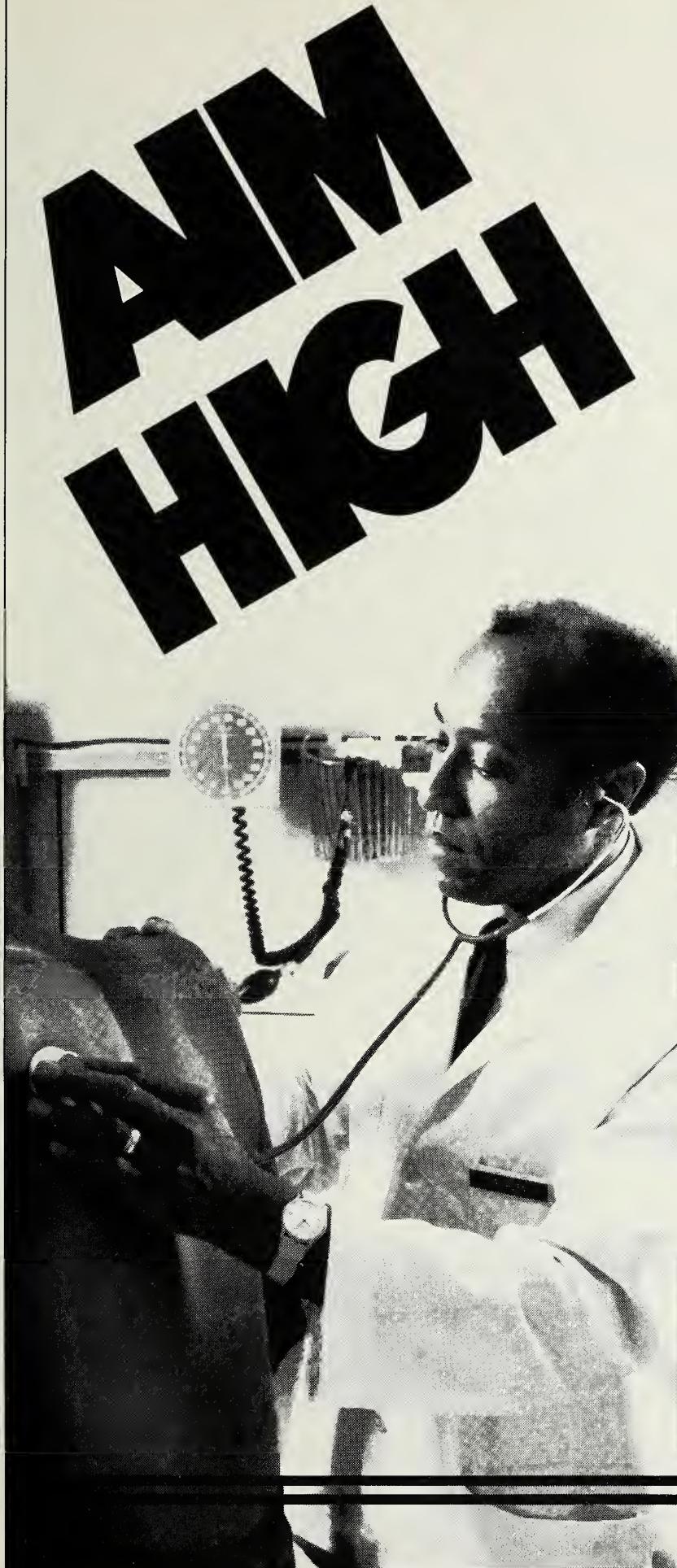
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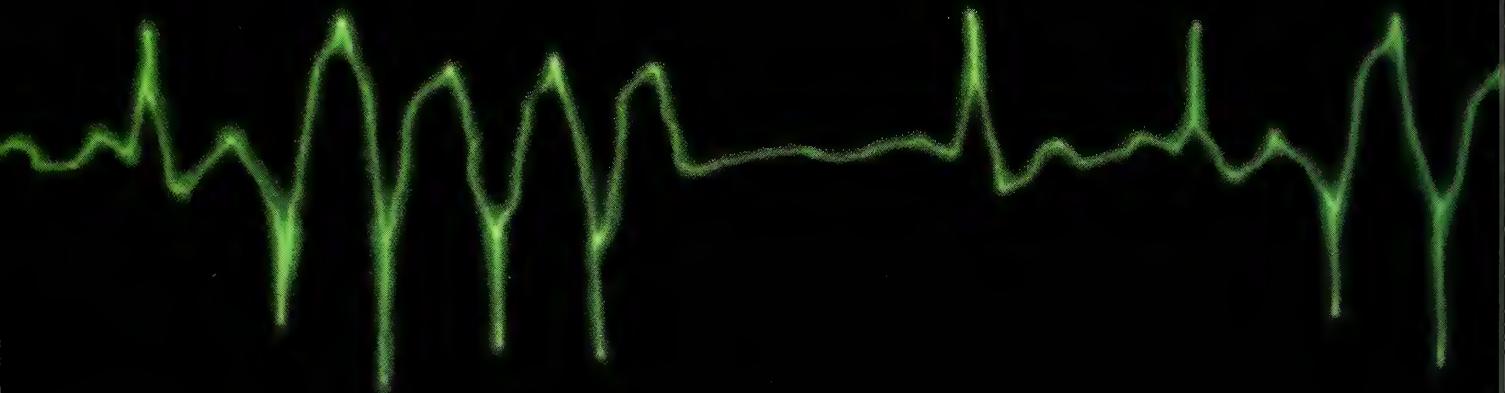
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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Cover artwork, titled "Eye on the Imagination," is by El Dorado artist Julie Waschka. Artwork made available by the Arkansas Artists Registry, a part of the Arkansas Arts Council, an agency of the Department of Arkansas Heritage.

Through barbed wire and over a fence, to grandmother's house we go - *The challenges and rewards of being a rural physician*

Ben N. Saltzman, M.D.*

As I look back upon my early experiences in the practice of general medicine in Mountain Home and Baxter County, I am reminded of the decisions I made to opt for a career as a country doctor as opposed to the hopes and wishes of my parents.

I spent six years in the Panama Canal Zone as an intern and resident at Gorgas Hospital. I thought seriously of making Canal Zone Medicine a career.

During my stint as an intern and resident, I became acquainted with Dr. Rector Hooper. His home was Rosey, Arkansas, quite close to Batesville. He was one year ahead of me and acted as my mentor at the hospital.

Dr. Hooper resigned his commission and returned to Arkansas immediately after the cessation of hostilities. He joined a medical group in Batesville, and acquired a Dr. Elisha Gray as a patient from Mountain Home.

Dr. Gray was aging rapidly and wanted to find a physician to replace him and to take over his practice. Dr. Hooper suggested me and called me long distance. He told me about the progress being made by the community of Mountain Home with the completion of the Norfork Dam and the planning for the construction of Bull Shoals Dam. The population at the time was only 1200, but increasing rapidly. The soldiers were coming home and babies were being born. Retirees were also moving in. He could promise me a very active practice. My wife, Betty, and I agreed to give it a try. We felt that if we became dissatisfied, we could always try something else. Our daughter Sue Ann was one year old and a good traveler.

Dr. Hooper drove me from Batesville to Mountain Home over one of the worst roads I have ever traveled. It was nothing but rock, dirt, and potholes. The only pavement was the street around the new Courthouse Building. Office space, transportation, office help, and a home were not readily available. I had to overcome these obstacles while my wife and daughter

lived with the Hoopers for about 6 months. Despite all of this, I wanted to stay. It was a challenge, and Dr. Gray was marvelous. He had written letters to his patients and they were waiting for me. I really felt wanted.

I became somewhat of an obstetrician. I utilized a collapsible delivery table that Dr. Gray had utilized over the years. He gave it to me, and it did the job. My deliveries were all done in the homes of the people all over the county and into the adjoining counties. The difficulty with having to deliver so many babies is that I couldn't see office patients. As one can imagine, I was busy day and night. Yet the people of Baxter County understood and made allowances.

My parents were not particularly happy with my decision to go into rural practice. They had hoped that coming out of the military I would settle into a big city practice, namely in Jacksonville, Florida, near their home. They couldn't understand why I would want to be a country doctor. I tried to tell them in letters about experiences with my patients and how much I learned from them and from the few retired doctors in the area. (The retired physicians were happy to share what they knew with me.)

One day two ladies came to see me with a plea I couldn't resist. Their grandmother had been bedfast for about a month. She had been in a coma for about three weeks and had been hospitalized for two weeks before being returned home, unimproved. Finally, the ladies were told that there was little hope that their grandmother would survive. They asked me if I would come out to see the little lady and perhaps think of something that might help.

I did not think that I would find something useful with her past history, but agreed to try. The home was located about five miles outside of Mountain home. I had to open two barbed wire gates and finally step over a stile to get to the house. It just so happened that my Dad had come to Mountain Home to see how I was getting along. I invited him to come with me and hoped that he would understand me better if he saw some of the obstacles as well as the satisfaction

* Dr. Saltzman is a retired family practitioner from Mountain Home. He is a member of the AMS Fifty Year Club and editorial board for *The Journal of the Arkansas Medical Society*.

that could be derived from this type of practice.

I carried a liter of D5W, a stand, some sterile I.V. needles and plastic tubing to the house. I fortunately found a vein that could be utilized several times. I showed the ladies how to shut off the fluid, remove the needle and hold pressure over the vein after the removal of the needle. I informed them that I would be back daily for one week with the same treatment. I complimented them on the cleanliness of the house and their care of the patient and urged them not to give up too soon.

My dad and I made our trips daily hoping for improvement, but seeing little. On return to the clinic each day, my Dad asked me if I wouldn't have had a

better life if I had gone into practice in Florida. I responded that this was a challenge and hoped that I could meet many such challenges in my life.

On Sunday, the last day of this particular week, we arrived at the house and were greeted at the door by one of the granddaughters. I could hear some conversation in the bedroom. We walked into the bedroom and saw granny sitting in a chair next to the bed. She greeted me in a friendly manner. I was relieved and happy to see the faces of the granddaughters.

On the way home, my father said to me for the first time in my life, "Son, I'm proud of you."

I later learned that granny lived for several more useful years.

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Medicine in the News

Health Care Access Foundation

As of February 1, 1997, the Arkansas Health Care Access Foundation has provided free medical service to 12,210 medically indigent persons, received 23,061 applications and enrolled 44,957 persons. This program has 1,757 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

UAMS Receives \$25.5 Million Grant for Geriatrics

Thanks to a \$25.5 million grant from the Donald W. Reynolds Foundation, the University of Arkansas for Medical Sciences will establish the new Donald W. Reynolds Department of Geriatrics and construct the Donald W. Reynolds Geriatrics Center.

Fred W. Smith, Chairman of the Donald W. Reynolds Foundation, explained that \$10.5 million will be used to establish the Donald W. Reynolds Department of Geriatrics in the College of Medicine and \$15 million will build and equip the Donald W. Reynolds Geriatrics Center. He said, "As the second geriatrics department established in the United States, the new Donald W. Reynolds Department of Geriatrics is being funded over a five-year period through the Donald W. Reynolds Foundation's initiative on aging and quality of life program."

"This is the largest grant from a single-funding source ever given to a public institution of higher education in Arkansas," said UAMS Chancellor Harry P. Ward, M.D. "Arkansas has both the people and the programs to support the new Donald W. Reynolds Department of Geriatrics. One of the supporters is Senator David Pryor whose national leadership in health policy has brought public attention and concern to older Americans' needs. Statewide, our many physicians and health care professionals working in the six Area Health Education Centers (AHEC) will benefit and contribute to the Donald W. Reynolds Department of Geriatrics."

Ward added, "In the past decade, UAMS has increasingly emphasized the area of aging. Through our affiliation with the John L. McClellan Veterans Affairs Medical Center, UAMS established one of the first Geriatric Research Education and Clinical Centers (GRECC) in the nation with funds provided by the Veterans Administration. Our emphasis on the study of aging is also a major educational concern of the UAMS Colleges of Nursing, Pharmacy, and Health Related Professions."



Artist's rendering of the Donald W. Reynolds Geriatric Center by Brooks Jackson Architects Inc.

The new chairman of the Donald W. Reynolds Department of Geriatrics - David A. Lipschitz, M.D., Ph.D. - said, "With this generous grant, we will train geriatricians to meet the overall physical and emotional health needs of older people. We will promote functional independence among the elderly, and we will show caregivers - many of them daughters and sons of aging parents - how to cope. Our health services research will help identify and solve quality-of-life problems for the elderly who are projected to reach 20 percent of the U.S. population by 2020. In addition, we will address national health issues related to serving the "baby boom" generation in the 21st century."

Mrs. Jo Ellen Ford, member of the UAMS Foundation Board and Chairman of the Center on Aging Community Advisory Committee Board, said that UAMS now has the opportunity to better determine how best to care for older citizens. She said, "Just as children are not merely small adults, we developed our current specialized Department of Pediatrics that is appreciated by all Arkansans. With the same commitment, UAMS will show that older adults have catastrophic diseases with complicated medical problems, which require different approaches to treatment. The new Donald W. Reynolds Department of Geriatrics will bring together health care professionals in one place where complex equipment can be acquired and specialized skills can be pooled and developed."

During the grant presentation ceremony, I. Dodd Wilson, M.D., Dean of the College of Medicine and UAMS Executive Vice Chancellor, said, "With the high percentage of older persons living in Arkansas, the new Donald W. Reynolds Department of Geriatrics fits the profile of our population. We are fortunate to have the support of Robert Butler, M.D., who now is serv-

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ing as a consultant to the Donald W. Reynolds Foundation. Under Butler's direction, the only other geriatrics department in the country was established at the Mount Sinai School of Medicine in New York. We look forward to working with Steven L. Anderson, Chairman of the Donald W. Reynolds Foundation's Committee on Aging and Quality of Life, as we establish milestones for the next five years."

The newly adopted mission of the Donald W. Reynolds Foundation is to present grants to qualified charitable organizations in Arkansas, Nevada and Oklahoma. The Foundation's Capital Grants Program annually reviews organizations that demonstrate sustainable programs, exhibit entrepreneurial spirit, and assist those served to be healthy, self-sufficient and productive members of their communities. The Reynolds Foundation - with offices in Tulsa, Oklahoma and Las Vegas, Nevada - has assets exceeding \$1 billion. According to the Foundation Center's ranking, the Donald W. Reynolds Foundation is among the nation's 30 largest.

Donald W. Reynolds was the founder and principal owner of Donrey Media Group which, at the time of his death in 1993, included 52 daily newspapers, 10 outdoor advertising companies, five cable television companies and one television station.

The Need for Geriatricians

Over the next 20 years, the percentage of the U.S. population that is over the age of 65 will explode. Today, only 1/8th of our nation is considered elderly; in 20 years, more than 1/5th will be over the age of 65.

In Arkansas, there are already many communities with more than 1/5th of the residents over age 65. This population mix reflects today what our entire nation will look like by the year 2020. A large fraction of the elderly in this state live in rural areas. Many are disadvantaged and have little or no access to basic health care services -- not to mention specialized geriatric care. Arkansas spends more Medicare dollars per capita than any other state in the country. Despite this expenditure, older Arkansans rank near the bottom in terms of overall health in the nation.

But sadly, as our aging parents enter the autumn of their lives today in the midst of a culture that prizes youth, they often find that modern medicine can prolong their suffering rather than relieve it. The challenge facing the field of geriatrics today is to help adults enjoy a longer lifespan with good health and to teach the elderly how to live with the natural aging process with grace and dignity. To achieve this, our health care system will need more geriatricians. At the root of this problem is the question -- who is educating physicians and other health care professionals about the special health problems of older persons?

At present, there is only one medical school in the nation with a department of geriatrics. It's located in New York City at Mt. Sinai Hospital. With the public announcement at UAMS in Little Rock on February 4, 1997, there is now a second one: the Donald W. Reynolds Department of Geriatrics within the UAMS College of Medicine.

Twenty-year Record of Geriatrics at UAMS

Geriatric initiatives at UAMS began about 20 years ago when Eugene Towbin, M.D., then Chief of the Veteran's Administration Hospital located on Roosevelt Road, had the foresight to persuade the Veterans Administration to develop a handful of centers of excellence in geriatrics across the nation.

In 1975, the VA Hospital in Little Rock was one of the first VA facilities in the nation to be awarded a Geriatric Research Education and Clinical Center (GRECC). It remains in operation today within the John L. McClellan Memorial VA Medical Center adjacent to the UAMS campus and affiliated with the College of Medicine.

This 20-year commitment to geriatrics and gerontology has produced an array of nationally-recognized programs in geriatrics education, health, and research. This well established GRECC program is the foundation upon which the Donald W. Reynolds Department of Geriatrics will be built.

The Vision of the Donald W. Reynolds Department of Geriatrics

The fundamental mission of the department is to present training in geriatrics to all medical students and to offer special training for those physicians who aspire to become geriatric specialists.

A major focus of the work conducted by the department in its new facility will be to promote functioned independence in older persons and to develop solutions that will prepare the health care system for the aging of the baby boom generation.

Clinical programs will target patients who are dependent as a result of cognitive impairment or because of physical problems such as stroke, arthritis, or frailty.

The department will also serve healthy older persons and assure that they remain functionally independent. Healthy 70-year-olds have many good years of life ahead of them. Through education, exercise, a prudent diet, stress management, and careful screening for age dependent illnesses, UAMS geriatricians will improve the chances of an older person remaining independent, living in their own home, and enjoying an excellent quality of life. Although medical advances based on current research may make it possible for more people to live longer, the department will work to assure that the life one has will be of the

highest quality. The ultimate goal is not necessarily to prolong life; rather, to optimize it.

The department will study the role of nutrition and exercise and apply this new knowledge to its patients -- particularly strength training for improving mobility, minimizing the risk of falling, and improving the overall health of older persons. *Information provided by UAMS Department of University Relations.*

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, the Board routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement, which is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: January 8, 1997

*Deborah Kay Barnhart Gustke, RN 42406, (Cabot) Probation - 6 months, \$500 - Civil Penalty
*W. Belle Jackson Pinegar, RN 30547 (Cabot) Suspension - 6 months, \$500 - Civil Penalty
*Steven Michael Carter, RN 32862 (Slidell, LA) REVOKED
*Sherri J. Carter, RN 32861 (Slidell, LA) REVOKED
*Carla Louise Jones, RN 51673 (Senatobia, MS) Consent Agreement, Probation - 3 years, \$500 - Civil Penalty
*Sharon Denise Brooks Anthony, LPN 31829 (Mountain Home) Consent Agreement, Probation - 2 years, \$500 - Civil Penalty
*Carla Lynn Bridges Mille, LPN 28011 (Little Rock) Consent Agreement, Probation-2 years, \$500 - Civil Penalty
*Kathy Ann Jones Peer, LPN 21264 (Little Rock) Consent Agreement, Probation-1 year, \$500 - Civil Penalty
*Lynetta Walker Buckley, LPN 18456 (Little Rock) Consent Agreement, Probation-1 year, \$500 - Civil Penalty
*Manda Beth Sample Rhines, LPN 30252 (Batesville) Consent Agreement, Probation-2 years, \$500 - Civil Penalty

LETTER OF REPRIMAND:

*Sheila Karen Kelly Beck, LPN 14045 (Franklin, AR) 11/25/96

VOLUNTARY SURRENDER:

*John Edward Cigrang, RN 34367 (Mabelvale) 12/16/96
*Deborah Dickinson, LPN 18506 (Donaldson) 11/21/96
*Deborah Lea Powell, RN 44419 (Little Rock) 12/20/96
*Michael Vincent Sheppard, LPN 24562 (Newport) 11/17/96

ALERT: If you have employed the following nurses or have any knowledge of their whereabouts, please notify the Board of Nursing at (501) 686-2700.

*Julie M. Duvall, RN 49140
*Debra Bussiere, RN 51249
*Carol L. Earls, LPN 26589

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AMS Newsmakers

Dr. Mary Louise Corbitt, a neurologist in Sherwood, recently completed Medical Acupuncture for Physicians sponsored by Continuing Medical Education, UCLA School of Medicine. She received 200 Hours in Category I.

Dr. Ralph Joseph, a physician of internal medicine in Walnut Ridge, has been selected to receive the Sam Walton Business Leader Award sponsored by the Wal-Mart Foundation. The Walnut Ridge Area Chamber of Commerce selected Dr. Joseph to receive the award.

Dr. Robert McCarron, a Conway orthopedic surgeon, has been included in Who's Who in Medicine and Healthcare for significant achievement in the medical field. Published by Marquis Who's Who, the book is a guide to 20,000 of today's leaders in the diverse fields of medicine and healthcare.

Dr. James Suen of Little Rock recently received a medallion of honor as the first recipient of the James Y. Suen, M.D., Endowed Chair in Otolaryngology - Head and Neck Surgery at UAMS. The chair was established with more than \$1.2 million raised from friends and former patients of Suen's.

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Dr. Suzanne Wong Yee, a Little Rock otolaryngologist and plastic surgeon, has been selected by KATV Channel 7 as its new medical correspondent to appear on "Daybreak" every Wednesday morning to answer health questions by viewers.

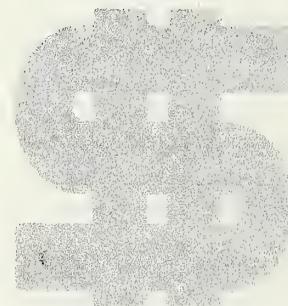
The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for November 1996 are: Michael Alan Chavin of Stuttgart; Benjamin Harrison Hall of Lincoln; Edward Parnell Hammons of Brinkley; Don Gene Howard of Fordyce; David E. Rowe of Pine Bluff and Eugene F. Still of Fort Smith.

Send your accomplishments and photo for consideration in *AMS Newsmakers* to:

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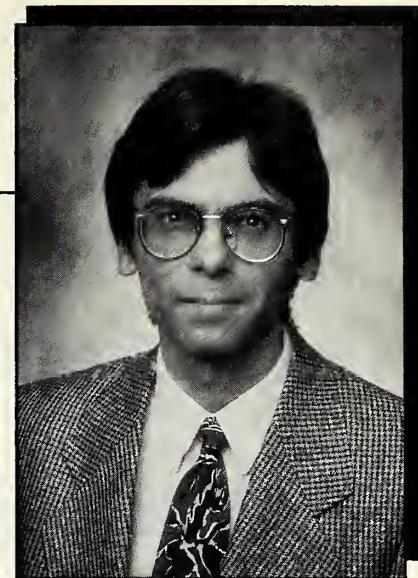


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New Member Profile



Istvan Molnar, M.D.

PROFESSIONAL INFORMATION

Specialty: Internal Medicine - Oncology

Years in Practice: First year

Office: Newport

Medical School: Semmelweis Medical School in Budapest, Hungary, 1991

Internship/Residency: Meridia Huron Hospital in Cleveland, Ohio, 1993

Volunteer work: American Cancer Society

PERSONAL INFORMATION

Date/Place of Birth: January 15, 1967 in Jaszbereny, Hungary

Spouse: Andrea Kiss, M.D., resident physician

Children: Daughters, Fruzsina and Luca, five and eight years old

Hobbies: Tennis, reading and classical music

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: A businessman

Person I most identify with: John Lennon

Favorite junk food: Hamburgers

Behind my back, they say: I am moody

Most valued material possession: My car

People who knew me in medical school, thought I was: Smart

The turning point of my life was when: I got married

Favorite vacation spot: Black Sea in Bulgaria

One goal I haven't achieved, yet: Travel around the world

One goal I am proud to have reached: Private practice in medicine

When I was a child, I wanted to grow up to be: A musician

First job: Nurse's aide

One word to sum me up: Relaxed

My philosophy on life: Enjoy life every day to the fullest

If you would like to appear in *New Member Profile* or *Member Profile*, contact Tina Wade at AMS at (501) 224-8967 or 1-800-542-1058.

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3. Participation in the AMS House of Delegates meeting gives county medical societies a voice in the policies of the state association.

4. The young physicians seminar "*Getting Started in Medical Practice*" is designed for residents and other physicians by addressing topics that physicians may face as they begin a medical practice.

5. Social events for AMS members and their guests include the Dr. Harold "Bud" Purdy Memorial Golf Tournament, receptions with a variety of entertainment.

6. A great opportunity for old and new friends to relax and exchange ideas.

Watch your mail for registration materials!!

Progress Report: Evaluation and Treatment of Ascending and Aortic Arch Aneurysm/Dissection

Frederick A. Meadors, M.D.*

Introduction

Numerous clarifications and improvements have been made in the understanding of disease concepts involving aortic aneurysm and dissection, procedures utilized to replace the involved segment(s), and brain protection during the conduct of ascending-arch aortic operations. A reasonably clear picture now exists regarding who the surgical candidates should be. Standardization of contemporary operative techniques offer patients excellent success rates following operations once thought to be very high risk.

Concepts

Recognition of potentially dangerous pathologic lesions involving the ascending aorta and/or transverse aortic arch is the essential first step in understanding whether the affected patient deserves further evaluation or simple observation. The normal diameter of the ascending aorta is 3.5 cm. and is the largest segment of the normal aorta anywhere in the body.¹ The aortic arch diameter gradually tapers, and the descending thoracic aorta's normal diameter is approximately 2.2 cm. Aneurysms of the ascending aorta and arch measuring 5.0 cm. are considered low risk lesions, while 6.0 cm. enlargements are "high risk" for rupture or acute dissection. Mortality with ascending-arch rupture is greater than 90% within minutes to hours of occurrence. Mortality from proximal aortic dissection is 90% within two weeks if left untreated surgically.²

Asymptomatic 5.0 cm. ascending-arch aneurysms are observed with serial surveillance CT scans or MRI scans if no other indication for a cardiac surgical procedure exists. Recommendations for incidentally discovered aneurysms of the ascending aorta greater than 5.0 cm. in patients undergoing coronary artery bypass grafting or valve replacement are for graft replacement to prevent subsequent enlargement, rupture, and dissection.

On their own merit, aneurysmal enlargements of the ascending-arch measuring greater than or equal to

5.5 cm. should be considered for elective graft replacement because elective operations carry less than 10% mortality rates and mortality for emergency procedures is usually in excess of 20%.³

Proximal Aortic Dissection

Acute proximal (ascending) aortic dissection is a deadly process. Diagnosis is usually made by CT scan. MRI, trans-esophageal echocardiography, and aortography are also valuable, depending on availability and the clinician's preference. Once the diagnosis of acute proximal aortic dissection is made, the consensus of most experts is to proceed directly to the operating room without attempting cardiac catheterization because of the risk of delaying definitive repair and technical difficulty encountered by the cardiologist engaging the coronary ostia in the presence of an ascending aortic intimal flap.

Repair of proximal dissection is accomplished via median sternotomy using profound hypothermic circulatory arrest and intraoperative EEG monitoring.

Blood flow is redirected into the true lumen following obliteration of the false lumen by suturing a dacron graft to the aortic arch beyond the intimal tear. The presence of transverse arch intimal tears occurs in less than 10% of cases and should be repaired by direct suture techniques or completely replaced by arch grafting.² Restoring blood flow in the true lumen prevents malperfusion of the brachiocephalic arteries, spinal cord, viscera, and extremities.

Acute aortic dissection may cause stroke or paraplegia from malperfusion of the brain or spinal cord circulation. Patients having sustained acute cerebrovascular accidents from dissection malperfusion are in general not operated upon because of prohibitive neurologic risk. Paraplegia from acute dissection is usually permanent and not reversible with proximal aortic reconstruction; however, since younger victims may have productive lives with paraparesis/paraplegia, operation is offered to this group to prevent rupture, cardiac tamponade, aortic valve commissure dislodgement or coronary artery ostial damage.

Patients with the dissection process extending into

* Frederick A. Meadors, M.D., is affiliated with Watkins, Bauer and Meadors, P.A., Cardiovascular and Thoracic Surgery in Little Rock.

the arch and distal aorta need lifelong follow-up with serial surveillance CT scans of the chest and abdomen to detect subsequent aneurysmal degeneration.

Crawford, et al, determined that late aneurysmal degeneration and rupture is a significant cause of late morbidity and mortality. Long-term control of hypertension is of extreme importance in decreasing the incidence of subsequent distal aneurysm formation in this group.

Aortic Valve Preservation

There are inherent benefits in preserving the native aortic valve whenever possible during ascending aortic operations. Even in the setting of significant aortic valve insufficiency caused by proximal aortic dissection, it is possible to preserve the valve with current techniques, and the results have been durable. Detailed knowledge of the sino-tubular junction, anatomy of the ascending aorta, and aortic annulus facilitates proper application of valve-sparing procedures.

Aortic valve preservation in patients with Marfan syndrome undergoing aortic root replacement has gained some international attention. At this time, these procedures are regarded as experimental, and the long-term durability remains unknown.

Brain Protection

The technical feasibility of suturing grafts in the aortic arch was simplified by widespread use of Cooley's open distal anastomosis under direct vision utilizing profound hypothermic circulatory arrest (PHCA). The purpose of systemic cooling using cardiopulmonary bypass is to reduce brain oxygen consumption as much as possible so that permanent neurologic injury will not occur during PHCA. Intraoperative EEG monitoring to guide the depth of cooling on CPB allows the determination of electro-cerebral silence. Systemic rewarming following completion of the arch graft slowly restores a normal EEG tracing as normothermia is re-established.

Experimentally, the brain temperature must be less than 22 degrees Celsius to have no electrical activity and, therefore, minimal metabolic requirements. No peripheral temperature measurement correlates with a flat-line EEG tracing; therefore, the continued use of intraoperative EEG monitoring is justified.⁴

The safe time period for PHCA has long been debated. In the most extensive series of hypothermic circulatory arrest operations done on the ascending-arch performed by one surgeon, Crawford demonstrated a significant increase in the stroke rate at 40 minutes and death rate at 60 minutes of ischemic time.⁵ With short circulatory arrest intervals (less than 20 minutes), the stroke rate was less than 1%. Proximal arch (or hemiarch) replacements are usually accomplished within these time constraints.

Total aortic arch replacement (with reattachment of the brachiocephalic vessels) frequently entails greater than 35-40 minutes of circulatory arrest time, and additional brain protection is felt to be needed by most authorities performing these procedures to prevent stroke and death.

Retrograde cerebral perfusion (RCP) through the superior vena cava (SVC) is a Japanese originated technique where cold oxygenated pump blood is perfused backwards through the SVC (hopefully to the brain) with the rest of the body at circulatory arrest.⁶ Blood can be seen emanating from the open arch brachiocephalic arterial origins during arch replacement and is thought to be beneficial to the brain for two reasons. First, it removes embolic debris from the carotid and vertebral arterial circulation by flushing it into the open operative field. Secondly, the retrograde cerebral blood flow nourishes the brain whose metabolic requirements are not zero.

Clinical series employing RCP have determined it to be a safe technique. Whether or not RCP is efficacious is not yet firmly proven. Animal studies have demonstrated an inhomogeneous distribution of blood flow to the brain using RCP.

Antegrade cerebral perfusion during PHCA for total arch replacement was tried and abandoned 30 years ago in Houston because of a high neurologic complication rate. This technique has been resurrected with improved results and accepted because of new and improved balloon-tipped catheters that can be passed into the brachiocephalic origins in anatraumatic manner from inside the open aortic arch. This lessens the risk of distal embolization to the brain previously associated with external cannulation of the brachiocephalic vessels.

Prosthetic Grafts

Dacron prosthetic grafts have been the standard conduit for ascending-arch replacement. Newer, commercially available collagen impregnated grafts (Meadow: Hemashield) have obviated the need for preclotting with blood or soaking the older dacron grafts with albumin and baking in the autoclave to seal interstices and decrease bleeding. Dilatation of Hemashield grafts was initially a concern but does not appear to be a significant clinical problem. Superior handling characteristics and ready availability make it our current graft material of choice.

Composite valve-graft conduits are used for replacement of the aortic valve, sinus of Valsalva segment of the ascending aorta, and varying lengths of the tubular segment of the ascending aorta. These procedures are more radical than isolated aortic valve repair/replacement plus or minus graft replacement of the supra-coronary ascending aorta because of the necessity for coronary arterial ostial reattachment. The

two commonly employed techniques to accomplish coronary reattachment are the Bentall procedure (direct aortic wall button reattachment of the right and left coronary ostia) and modification of the Cabrol procedure using an 8 or 10 mm. dacron bypass graft sewn to the aortic wall surrounding the right and left main coronary ostia and the ascending graft.

The decision to replace the sinus segment and use a composite valve-graft prosthesis is of extreme importance because of slightly higher operative risk compared with separate valve-ascending graft procedures. Composite mechanical valve (St. Jude or Medtronic) graft prostheses require the patient to receive lifelong oral anticoagulation with Coumadin to lessen thromboembolic complications. The inherent risks of lifelong oral anticoagulation are not benign and have been previously described, including thromboembolism from inadequate drug levels and bleeding complications from excessive or even therapeutic drug levels.

Elephant Trunk

The elephant trunk procedure was first introduced by Borst of Germany.⁷ It involves complete graft replacement of the aortic arch in patients with aneurysmal changes also affecting the descending thoracic or thoraco-abdominal aorta. A short segment of the dacron graft is left dangling in the proximal descending thoracic aorta in anticipation of a planned second staged operation to replace the distal aneurysm. Several technical advantages are gained during the second operation. Survival rates following "completion elephant trunk" procedures are expectedly not as good as those in patients who need to undergo only a single operation to repair thoracic aortic aneurysm.

Adjuncts for Hemostasis

Operations incorporating the use of PHCA to prevent neurologic complications may be associated with intraoperative coagulopathy. Two antifibrinolytic drugs, Amicar and tranexemic acid, have been used to prevent fibrinolysis during cardiac surgery. They should be given prior to onset of cardio-pulmonary bypass to achieve optimal effects.

Aprotinin (trasylool) is a serine-protease inhibiting protein that has been used extensively in the United Kingdom and increasingly in the United States during complex cardiovascular procedures to enhance clotting properties and prompt acquisition of surgical hemostasis.

If used on cases in which profound hypothermia has been employed, it is considered important that intraoperative Heparin levels be monitored by the perfusion team to assure adequate intraoperative anticoagulation on cardiopulmonary bypass. An increased incidence of disseminated intravascular coagulation has been reported by authors using aprotinin on cardiovascular procedures when Heparin levels were not monitored. Aprotinin invalidates the activated clotting

time. Other untoward effects include a definite slight increase in postoperative renal failure requiring hemodialysis and anaphylaxis in those patients previously exposed to the drug. It is acceptable practice to begin aprotinin during the rewarming phase of a deep hypothermia case or post-operatively in a "rescue" fashion to reduce bleeding.

Comment

Decreasing the unfavorable natural history of patients afflicted with proximal aortic dissection and/or ascending-arch aneurysm begins with proper initial diagnosis. Acute proximal "dissections" are taken to the operating room as soon as the diagnosis is confirmed. Chronic aortic dissection (greater than 14 days from onset) of the ascending aorta and/or arch is managed in a similar manner to degenerative aneurysmal disease in these segments. If the aortic dilatation is greater than or equal to 5.5 cm., an elective surgical repair is considered, especially in younger, good risk patients. Those patients with aneurysms smaller than 5.5 cm., in good health, are followed with serial surveillance imaging studies, usually CT scans or MRI. Individuals with aneurysms greater than 5.5 cm. but serious accompanying co-morbidities may be managed expectantly until the diameter increases further or symptoms develop, with the understanding that life-threatening rupture or dissection can occur.

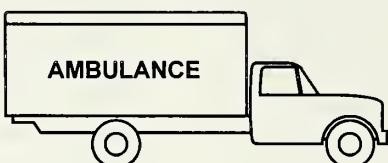
Although corrective surgery remains a formidable undertaking for patient and surgeon, expected outcomes have steadily improved. Early survival rates in specialty centers are in the 90-97% range, depending on etiology, extent of aneurysm or dissection, patient co-morbidities, and experience of the physician and nursing care providers.

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Needed - Documentation in Quotation Marks

J. Kelley Avery, M.D.*

Case Report

In our best efforts to do what is clinically appropriate, we can, and do, rely too much on our recall of the sense of a conversation with a patient, a nurse, or even a colleague rather than on verbatim documentation. Such verbatim documentation is not always easy to come by because of the particulars of a situation in which we may find ourselves. We may be in the room with a very sick patient, or on the telephone giving instructions to a patient or a parent about a sick child, or in the emergency room (ER) on a busy shift. Wherever we are, unless there is verbatim documentation sometimes the conversation with a person or the instructions given, when reconstructed later, can distort the picture of what really happened.

A mentally retarded man was brought to the ER after midnight. The history obtained from friends was that the patient had been involved in a fight and had been struck over the head several times by the adversary with a stick. The patient appeared intoxicated, and in fact had a blood alcohol level over twice that considered to be legal evidence of intoxication.

The patient was almost impossible to control. He got up off the stretcher several times, walked about in the ER, and had to be escorted back to his place by the nursing staff. On physical evaluation, the man's vital signs were unimpressive except for an initial blood pressure of 146/110 mm Hg. This changed in about 20 minutes to 132/94 mm Hg. The initial reading was attributed to the patient's restlessness and agitation. Neurologically, the patient seemed in command of his faculties to the extent expected of an intoxicated and injured emergency patient. He responded appropriately to questions and followed simple commands. He appeared to be oriented as to time, place, and person. He claimed no memory of the altercation and the injury that brought him into the ER. It was noted that while his pupils reacted normally and were of equal size, there was some constant external deviation of the left eye, which both the patient and those who

accompanied him said had been present all of his life. There were contusions over the occipital region, along with a small laceration in this area. Some blood in the right ear canal obscured the tympanic membrane, raising the question of a basilar skull fracture. The nature of the injuries and the possibility of the fracture were of sufficient concern for the ER physician to think that neurologic evaluation and observation in a level I trauma center were indicated.

On contacting the medical center, the ER physician had a conversation with the neurosurgical resident about his patient and the possible need for more skilled care than was available at the community hospital some distance away. The consultant in the center told the attending ER physician that the center was extremely busy and that the CT was "backed up." He urged that, if possible, the scan be done locally and that the results of that examination be made known to him. At that point, the case would be discussed in the light of the CT examination and transfer decided on at that time.

While the physician was on the phone with the trauma center, the patient became much more agitated, aggressive, and somewhat belligerent. On reevaluation, the patient's left pupil was beginning to widen and his level of consciousness began to decrease. Twenty minutes after the first phone call, the same neurosurgical consultant was contacted and told of the change in status of the patient. Authorization was given for immediate air transport. The patient was intubated for transport, and about 90 minutes elapsed between the time the decision to transfer was made and the patient's arrival at the center, 2-1/2 hours after his admission to the community hospital ER.

On arrival at the center, the patient was on full respirator support and deeply comatose. A CT examination revealed a large right-sided epidural hematoma requiring emergency surgery and decompression. Post-operative support included a tracheostomy and a jejunal feeding tube. He continues to function at the brain stem level.

A lawsuit was filed alleging a failure to transfer to an appropriate facility in a timely fashion, causing severe and permanent brain injury.

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the July 1994 issue of the *Journal of the Tennessee Medical Association*. It is reprinted with permission.

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Loss Prevention Comments

Although only a relatively small settlement was required in this case, the issues raised are very pertinent to many different areas of our professional lives. The allegations of a failure to do something in a "timely fashion," resulting in some injury that would not have occurred had the action been taken in a more "timely manner," are increasing in frequency and severity. These charges can and do involve us no matter what our field of practice might be.

The essence of this issue was that the attending ER physician believed that in recommending the CT be done locally because the machine in the level I trauma center was "backed up," the receiving physician was refusing to accept the patient at that time. He testified to this belief in pretrial discovery deposition. The neurosurgeon, on the other hand, testified that he never refused transfer at any time. On the record it became apparent that the two physicians involved in the transfer decision were at odds as far as their memory of events was concerned.

Documentation on both ends of the transfer was brief, and could support either view. On the transferring end of the conversation, there was not any recorded evidence that would support the testimony of the doctor in the community hospital ER. There was not a statement that "neurosurgical consultant denies transfer until after CT done." On the receiving end, the same is true. It would have been helpful if the neurosurgical consultant had documented "since our CT is backed up at the moment, collective decision made to expedite the CT at local facility if time and condition of the patient allow." The lack of this kind of descriptive documentation on both ends of this conversation allowed the plaintiff to contend that the community hospital's ER physicians had delayed the action, allowing brain damage to occur.

The settlement was relatively small, but the issues in this case are very large, indeed!

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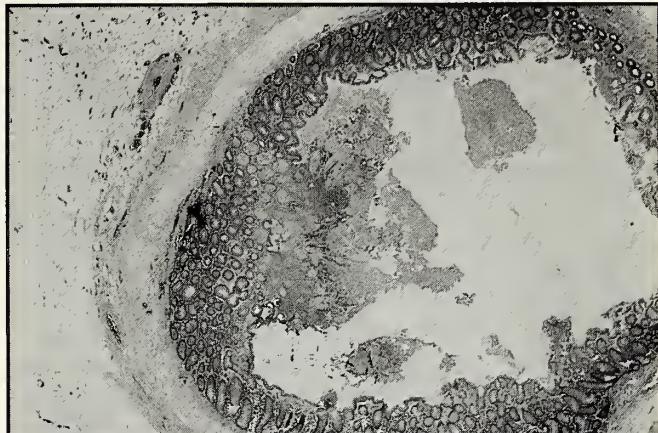


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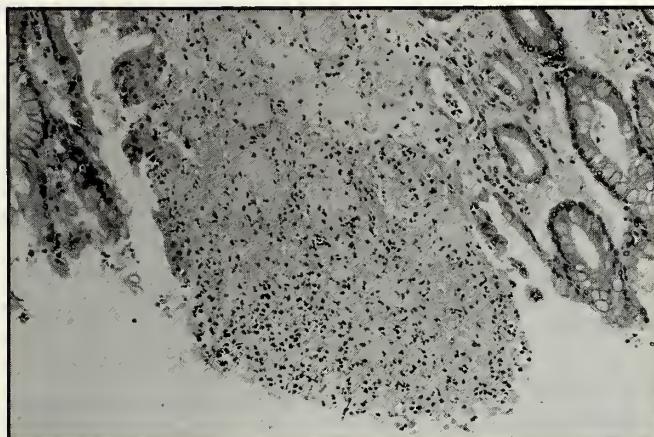
Clinicopathological Images, a new one-page feature section of clinical/pathology photos with a brief description, will appear in The Journal quarterly.



A



B



C

Pseudomembranous Colitis

Clostridium Difficile Pseudomembranous Enterocolitis is a descriptive entity of the gross findings of white and yellow surface plaques due to various antibiotic use, mediated by 2 toxins (A-enterotoxin, B-cytotoxin), that induce fluid flux, membrane permeability and intense mucosal inflammation and even ulcerations with diarrhea. Diagnosis is accomplished by identifying the toxins in the feces or by the latex-agglutination test or culturing the organism. Therapy includes metronidazole or vancomycin.

This patient presented with severe bloody diarrhea and toxic megacolon who underwent a colectomy revealing extensive green pseudomembranes with erythematous mucosa (picture A); under low power view note the diverticulum with typical "exploding" lesion (picture B); and under high power view the exploding crypts with pseudomembrane formation composed of fibrin and acute inflammatory cell (picture C).

Authors:

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Cardiology Commentary and Update

J. David Talley, M.D.*

Vito Calandro, M.D.*

Tracy Dietz, M.D.*

Ha Dinh, M.D.*

Stress Electrocardiography: A Review

A stress electrocardiogram (ECG) is a non-invasive test used to evaluate cardiac function. Recently we cared for a patient who presented with symptoms characteristic but not pathognomonic of myocardial ischemia who had a positive stress ECG. We review the salient features of this diagnostic modality. This review has been recently published.¹

Patient Report

The patient is a 57-year-old male with a history of dull achy chest discomfort associated with shortness of air occurring with exertion and at rest. He had systemic arterial hypertension and prior cigarette use (see complete problem list, Table 1). The patient's brother underwent coronary artery bypass graft (CABG) surgery in his early 50's. The ECG at rest showed sinus bradycardia and tiny q-waves in the inferior leads.

The patient exercised for 10 minutes on a standard Bruce protocol achieving 11 metabolic equivalent test (MET) units and a double product of 26,390 (peak heart rate of 145 bpm, 90% of age-predicted maximal heart rate and a peak blood pressure of 182/90). At peak exercise there was greater than 1 mm of horizontal ST segment depression in the inferior-lateral leads.

Cardiac angiography showed an 80% diameter stenosis of the ostial portion of the left main coronary artery (Figure 2) and a 50% stenosis of the mid-right coronary artery. The left ventricular function was normal. He underwent CABG surgery utilizing the left internal thoracic artery which was anastomosed to the left anterior coronary artery and reverse saphenous vein grafts were anastomosed to the second marginal and posterior descending arteries. His post-operative course was unremarkable.

* Drs. Talley, Calandro, Dietz and Dinh are with the Division of Cardiology, Department of Internal Medicine, at UAMS.

Indications, Contraindications, and Complications of Stress Electrocardiography

A stress electrocardiogram is used to detect and quantify coronary artery disease, assess functional capacity, monitor therapeutic response to cardiac medications, and to evaluate cardiac rhythm.² Careful attention to the indications and contraindications for doing stress electrocardiography (Table 2) and monitoring the patient during the examination will reduce the complications of the test. In a series of more than 500,000 stress electrocardiograms, complications included one death, four myocardial infarctions, and 50

Table 1 - Complete Problem List

1. Coronary Artery Disease
 - Etiology: Atherosclerosis
 - Anatomy: A. Cardiac Catheterization (2/3/97): 80% left main, 50% mid right coronary artery
 - B. CABG surgery (2/6/97): Left ITA→LAD, RSVG→OM2, RSVG→PDA
- Physiology: A. Presentation with angina pectoris
- B. Cardiac catheterization (2/3/97): normal LV function
- Functional Capacity: Class I at presentation, now asymptomatic
- Objective Assessment: Severe disease at presentation, now mildly compromised
2. Systemic Arterial Hypertension
3. Substance Use
 - A. Prior cigarette use, discontinued

life threatening arrhythmic events per 10,000 tests done. These complications are more common in patients who undergo the procedure soon after myocardial infarction or as a method to evaluate ventricular arrhythmias.³

Terminology in Stress Electrocardiography

An understanding of principles of exercise physiology and statistical terms used in analysis of stress electrocardiography is essential to comprehend and properly interpret the test. Definitions of commonly used terms are in Table 3.

Table 2 - Indications and Contraindications for Performing Stress Electrocardiography

Indications	Contraindications	
	Absolute	Relative
evaluate symptoms of coronary artery disease	acute myocardial infarction within 3 to 5 days	left main or equivalent coronary artery disease
quantify the extent of coronary artery disease	unstable angina pectoris	moderate or severe valvular stenosis
assess functional capacity	uncontrolled arrhythmias	electrolytic abnormality
monitor therapeutic response to cardiac medications	acute cardiac infection	significant pulmonary or systemic arterial hypertension
evaluate the cardiac rhythm response to exercise	symptomatic severe aortic stenosis	hypertrophic cardiomyopathy
	uncontrolled congestive heart failure	depressed mental acuity
	acute pulmonary embolus or infarction	2nd or 3rd degree atrioventricular block
	non-cardiac conditions that effect or aggravate exercise performance	
	physical disability that precludes a safe test	
	lower extremity thrombosis	

Modified from: Fletcher GF, Balady G, Froelicher VF, Hartley LH, Haskell WL, Pollock ML. Exercise standards: a statement for health care professionals from the American Heart Association. Circulation 1995; 91:580.

Methods

The Patient. The patient should be fasting for at least two hours before undergoing a stress electrocardiogram. The indications, methods, benefits, and limitations of the test should be fully discussed with the patient before the procedure. Informed, written, and witnessed consent should be obtained. A history (including medications) and physical examination of the cardiovascular system is done. A physician, or trained assistant with direct physician oversight, supervises the procedure. During the test, the patient's symptoms and signs (heart rate, blood pressure, cardiac examination) and the electrocardiogram (ST segments, conduction abnormalities, and arrhythmias) are closely monitored at each level of exercise. When the endpoint of the test is reached, monitoring is continued until the patient is asymptomatic and vital signs have returned to baseline values.

Type of exercise. The patient should be able to exercise for the stress electrocardiogram to have diagnostic quality. An inadequate exercise level decreases the specificity of the test dramatically. Recognizing the patient's physical limitations and conditioning are important so that an appropriate type of exercise can be prescribed.

A stress electrocardiogram measures the relationship of myocardial oxygen demand and supply to the heart. Most commonly, demand is increased with physical exercise and therefore increases heart rate and myocardial contractility. Demand may be increased by exercise of either the lower or upper extremities or with the use of other modalities. A stress test using a motor driven treadmill or bicycle ergometry is the preferred method of doing lower extremity stress electro-

cardiography. Walking is easier than cycling and more commonly results in a satisfactory exercise response. Usually, an averaged conditioned adult patient without significant physical limitations can undergo a stress electrocardiogram using a standard Bruce protocol (Figure 3). In this protocol, the speed and incline of the motor driven treadmill is increased every three minutes. Less strenuous lower extremity exercise protocols (Balke and Naughton) are prescribed for poorly conditioned patients.

Myocardial oxygen demand may also be increased with arm ergometry, noninvasive pacing, and intravenous dobutamine infusion. These methods are used for an inadequate physiological response or physical limitation to lower extremity exercise. They are usually combined with radionuclear angiography, echocardiography, or nuclear scintigraphy to enhance diagnostic accuracy.

The distribution of myocardial oxygen supply can be altered with coronary vasodilators such as dipyridamole and adenosine. These agents dilate normal but not atherosclerotic arteries thereby shunting blood toward normal tissue and away from ischemic zones. Complementary imaging techniques are also used with this procedure.

Factors Which Modify Stress Electrocardiographic ST Segment Changes

A 12 lead stress electrocardiogram is the standard test done to detect coronary artery disease. The specificity of the test is decreased in pre-menopausal females, patients with mitral valve prolapse, and patients with left ventricular hypertrophy and resting ST-T wave abnormalities. In these instances, use of a supplemental imaging modality (myocardial perfusion or echocardiography) is recommended. False-positive stress electrocardiography is also seen in patients with hypokalemia or receiving cardiac glycosides or psychotropic medications. The electrolyte abnormality should be corrected and the medications stopped for one week, if possible, before the test.

Endpoints. Three endpoints are used in stress electrocardiography to evaluate cardiac function: 1) symptoms and 2) signs of maximal exercise capacity, and 3) diagnostic electrocardiogram changes. Symptoms suggesting maximal exercise capacity are increased chest or leg pain, exhaustion, dyspnea, unsteady gait, cyanosis, pallor, or the patient's desire to stop the test. A symptom limited endpoint of stress electrocardiography usually produces increased specificity of the test due to heightened exertion. Signs of maximal oxygen consumption are indirect and include a maximal predicted heart rate or MET units (Table 2 and Figure 3). For a heart rate or MET limited test to be diagnostic,

**Table 3 - Standard Definitions
in Stress Electrocardiography**

Statistical Analysis		Exercise Physiology	
sensitivity	<u>true-positive</u> all patients with coronary disease	MET = metabolic equivalent test	3.5 mL O ₂ /kg/min
specificity	<u>true-negative</u> all patients without coronary disease	VO _{2max} = maximum ventilatory oxygen consumption of the patient	maximum cardiac output x maximum arteriovenous difference
positive predicative value	<u>true-positive responses</u> all positive responses	MPHR = maximal predicted heart rate	female = 216 bpm - 0.88 x age male = 204 bpm - 0.6 x age
negative predicative value	<u>true-negative responses</u> all negative responses	MO ₂ = myocardial oxygen uptake	estimated by double product = heart rate x systolic blood pressure
Bayes' theorem	the index of suspicion (pretest probability) that the disease is present		

the exercise level must be near maximal for the test to have appreciable specificity. Five electrocardiographic characteristics are assessed during a stress electrocardiogram: the degree, slope, time of onset and duration of ST segment changes, and the presence of ventricular arrhythmias.

Interpretation of Results

Proper interpretation of a stress electrocardiogram requires precise understanding of the continuous and inverse relationship between sensitivity and specificity. A symptom limited stress electrocardiography is highly correlated with the presence of coronary artery disease. Patients who are asymptomatic have less than a 10 percent incidence of coronary artery disease, compared to more than a three-fourths occurrence if the patient develops angina pectoris during the test.⁴

Changes in the electrocardiogram may be characteristic of myocardial ischemia or injury and are correlated with a long term cardiovascular event (Figure 4).⁵ The length of the PR segment is a balance between sympathetic and parasympathetic tone and therefore may shorten, remain the same, or lengthen. The slope of the ST segment is analyzed 0.08 second after the J point (Figure 5). The slope may remain at the baseline, have downward, horizontal, or upward depression, or be elevated above the baseline. A normal response to exercise is a ST segment that remains level with the baseline. Downward sloping ST segment depression is a highly specific marker of severe multiple vessel coronary artery disease.⁶ Horizontal and up sloping ST segment changes suggest less extensive coronary artery disease. ST segment elevation is seen with epicardial injury, left ventricular aneurysm, or pericarditis. There is no correlation of ST segment depression and location of the responsible coronary lesion. ST segment elevation is a useful guide to underlying coronary artery anatomy. T wave inversion is commonly seen with exercise and is a nonspecific marker of significant coronary artery disease. Inversion of the

u-wave is an insensitive, but a very specific finding for a critical stenosis of the left anterior descending coronary artery. As noted in Figure 3, the amount of ST segment depression, slope of the ST segment, time to onset and duration of ST segment changes are correlated with long-term cardiovascular events.

A variety of arrhythmias can be seen during exercise. Atrial arrhythmias are common, seldom hemodynamically significant, and usually revert to normal in the post exercise period. Isolated ventricular beats may also be observed and do not signify coronary artery disease. Sustained or complex ventricular ectopy is seen in less than 1% of all patients undergoing stress electrocardiography and may occasionally require pharma-

cological or electrical therapy. These life threatening arrhythmias suggest the need to define the extent and severity of coronary artery disease and left ventricular dysfunction.

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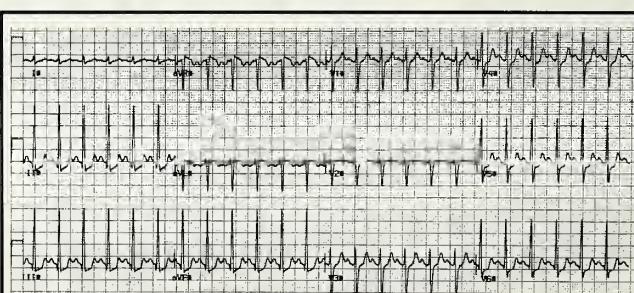
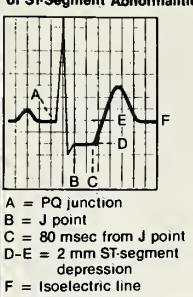


Figure 1. The patient exercised for 10 minutes on a standard Bruce protocol achieving 11 metabolic equivalent test units (MET, peak heart rate of 145 bpm, 90% of age-predicted maximal heart rate and a peak blood pressure of 182/90). At peak exercise there was greater than 1 mm of horizontal ST segment depression in the inferior-lateral leads.



Figure 2. A coronary angiogram in the left anterior oblique position revealing an 80% stenosis of the ostial portion of the left main coronary artery (arrow).

Nomenclature for Determination of ST Segment Abnormalities



Patterns of Myocardial Ischemia

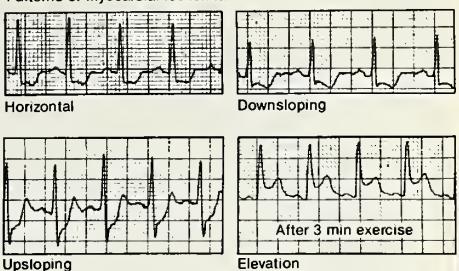


Figure 5. Criteria for determination and types of ST segment changes in stress electrocardiography. The slope of the ST segment is determined 0.8 second after the J point, and may be directed downward, horizontal, or upward. ST elevation may also be seen. (From Brachfeld N. ECG exercise tolerance test: interpretation of results. Primary Cardiology November 1984, page 35).

Test Name			Staging by MET																		
			Minutes per Stage	Speed and Grade	1	6	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ellestad	3-2-3	mph % grade								17	3									5	10%
Bruce	3	mph % grade								17	10%									4.2	16%
Balke II	2	mph % grade								3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Balke I	2	mph % grade								3	3	3	3	3	3	3	3	3	3	3	3
Naughton	2	mph % grade	1	0%	2	0%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
MET			16	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
Oxygen use (ml/min/kg)			5.6	7	10.5	14	17.5	21	24.5	28	31.5	35	38.5	42	45.5	49	52.5	56			
Functional Class (AHA)			IV		III		II									I					

Figure 3. Standard protocols used in stress electrocardiography and their conversion to metabolic equivalent test units, oxygen use, and functional class. Abbreviations: AHA = American Heart Association, MET = metabolic equivalent test. (From Brachfeld N. The electrocardiographic exercise tolerance test: methods and procedures. Primary Cardiology November 1984, page 25).

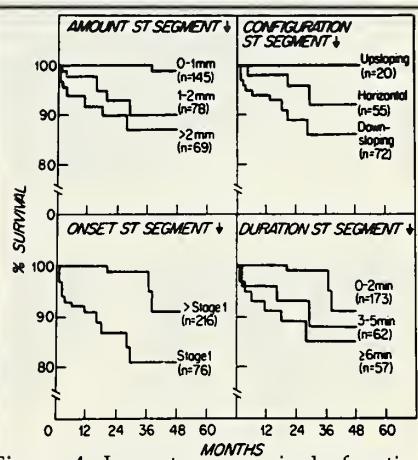


Figure 4. Long term survival of patients based on the amount, configuration, time of onset, and duration of ST segment depression. (From Weiner DA, McCabe CH, Ryan TJ. Prognostic assessment of patients with coronary artery disease by exercise testing. Am Heart J 1983;105:749, with permission).

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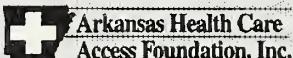
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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Influenza Update

Arkansas - Through early February 1997, the Arkansas Department of Health has obtained 12 positive influenza cultures. All were type A, subtype unknown. Counties with lab-confirmed flu are Arkansas, Ashley, Bradley, Garland, Greene, Lafayette, Mississippi, Montgomery and Pulaski.

United States - Influenza morbidity peaked between mid-December and early January and has declined since that time. Preliminary data from the CDC's sentinel physicians suggest that influenza-like illness in the U.S. has returned to baseline levels. For the week ending January 25 (week 4), epidemiologists in 11 states reported "widespread" activity. Twelve states, including Arkansas, reported "regional" activity and 26 states reported "sporadic" activity. One state did not report.

For most of the influenza season, influenza type A accounted for 97-100% of the isolates reported in the U.S. overall. However, during the week ending January 4 (week 1), the proportion of influenza type B isolates began to increase, reaching 15% by week

Based on reports received from 121 cities, 8.8% of all deaths reported by the vital statistics offices in 121 U.S. cities, during week 4 were attributable to pneumonia and influenza. This marks the seventh consecutive week that percentages have exceeded the epidemic threshold of 7.3%.

For more information on influenza or to report outbreaks, call the Arkansas Department of Health, Division of Communicable Disease & Immunization at (501)661-2784 or the Communicable Disease Reporting System at (800)482-8888.

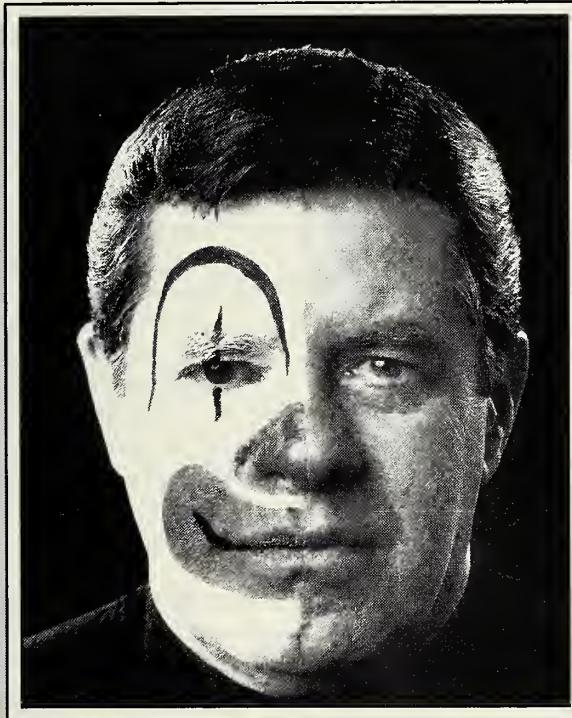


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Reported Cases of Selected Diseases in Arkansas Profile for December 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Dec. 1996	Total Reported Cases YTD 1996	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	10	240	153	187
Giardiasis	20	183	131	126
Shigellosis	19	176	176	193
Salmonellosis	22	454	332	534
Hepatitis A	36	508	663	253
Hepatitis B	4	86	83	60
HIB	0	0	6	5
Meningococcal Infections	2	33	39	55
Viral Meningitis	3	36	31	62
Lyme Disease	0	26	11	15
Rocky Mountain Spotted Fever	0	22	31	18
Tularemia	0	19	22	23
Measles	0	0	2	5
Mumps	0	1	5	7
Gonorrhea	304	5027	5437	7078
Syphilis	16	706	1017	1096
Legionellosis	0	1	5	16
Pertussis	0	16	59	33
Tuberculosis	45	225	271	264

For a listing of reportable diseases in Arkansas, call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893.

Getting Acquainted

Samuel E. Landrum, M.D. Journal Editorial Board Member

Dr. Samuel E. Landrum, a Fort Smith general surgeon, is one of six editorial board members for *The Journal of the Arkansas Medical Society*. By submitting numerous editorials and reviewing many scientific articles for publication consideration, Dr. Landrum has contributed greatly to the quality of *The Journal*.

Dr. Landrum has been a member of the AMS for thirty-two years. To him, being an active member means having a competent voice in issues that come before the legislature and a joint concern for communicable disease and social issues as they effect people's health. He believes the most important issue facing the AMS is keeping an emphasis on the needs of patients and the so called health industries.

Dr. Landrum's journey in the medical field began in 1956 when he received his doctoral degree from the University of Tennessee College of Medicine. He then traveled to Tuscaloosa, Alabama, where he trained at Druid City Hospital. From 1957 through 1961, he trained at the Henry Ford Hospital in Detroit, Michigan.

Finally in 1961, he landed in Arkansas where he served in the U.S. Army Medical Corps at Ft. Chaffee. In 1962, he was board certified in surgery and, in 1963, received his license to practice in the state of Arkansas - which he has done ever since.

As far as the future is concerned, Dr. Landrum is very optimistic and challengingly looks forward. In his May 1996 editorial entitled "Good Times are Coming," Dr. Landrum mentions a couple of notable medical improvements that took place while he was a medical student.

"The polio vaccine was announced when we students were in class, and it brought our hearts a swelling of joy..." he wrote. "Similarly, we were exhilarated when a professor told our class that it had just been found that corticosteroid therapy was allowing children with leukemia to live six months instead of dying in a very few weeks."

He continued his editorial by listing some good things he believes "will come along soon to the benefit of patients and surprisingly the pleasure of practicing physicians." After reading Dr. Landrum's editorial, it is quite obvious that previous medical improvements along with hope have lead him to view the medical field with buoyancy and courage.

In addition to many professional affiliations, Dr. Landrum served from 1980 to 1983 on the AMS Member Peer Review Committee. Since 1977, he has been Chairman of the District Professional Relations Committee for the AMS. He is a fellow of the American College of Surgeons and has served in the Arkansas Chapter as secretary/treasurer (1982-83), vice president (1984-85) and president (1986-87). In 1976, he was honored with the Trauma Achievement Award by the American College of Surgeons' Committee on Trauma. From 1974 through 1977, he was appointed Chairman of the Governor's Council on EMS.

Dr. Landrum was born January 16, 1935, in Martin, Tennessee. He is married to Annette, a retired pathologist, who is now the Medical Director of Sparks Regional Medical Center. They have four children who are now scattered from Los Angeles to Amsterdam. Their son is the manager of European Operations for a manufacturing company; their oldest daughter practices internal medicine in Springdale; their youngest daughter is a senior financial officer for an international company and their other daughter, an electrical engineer, is rearing their youngest grandchild and raising ostriches and emu.



Hobbies: Travel, dancing and an amateur interest in the stock market.

If I had a different job, I'd be: A teacher.

The person I most admire: My wife, Annette V. Landrum, M.D.

Best Habit: Showing up on time.

Worst Habit: Procrastination.

One of my pet peeves: Pretentiousness.

Favorite book, television show and/or movie: My favorite book is any book of Anne Tyler's. *Frasier* is currently my favorite television show and my favorite movie is *Stalag 17*.

The turning point of my life was: When the Army Medical Corps drafted me and assigned me to Fort Chaffee, Arkansas.

When I was a child, I wanted to grow up to be: A doctor.

My philosophy of life: To prepare, treat people fairly and work hard.

One word to sum me up: Compulsive.

ARKANSAS MEDICAL SOCIETY 1997 ANNUAL CONVENTION

ARLINGTON HOTEL • HOT SPRINGS, ARKANSAS
MAY 1 - 3, 1997



SCALING NEW HEIGHTS

WEDNESDAY, APRIL 30, 1997

6:30 p.m. President's Club Meeting

THURSDAY, MAY 1, 1997

9:00 a.m. Golf Tournament

11:30 a.m. Fifty Year Club Luncheon

1:00 p.m. Registration Opens

1:00 p.m. Young Physicians Seminar
"Getting Started in Medical Practice"

2:00 p.m. Council Meeting

3:30 p.m. Welcome Reception

5:00 p.m. House of Delegates

6:00 p.m. Opening Night Reception
*Physicians, guests, exhibitors
and sponsors are invited.*

FRIDAY, MAY 2, 1997

7:30 a.m. Council Meeting

8:30 a.m. Continental Breakfast
Exhibits Open

9:30 a.m. Reference Committee
Meetings I & II

10:30 a.m. First Feature Session
*"Physician Accreditation in the New
Managed Care Environment"*

FRIDAY, MAY 2, 1997 (CON'T)

12:00 p.m. Shuffield Lecture/Luncheon
Speaker: Congressman Vic Snyder, MD

1:30 p.m. Exhibit Center Open
*Refreshments
Grand Prize Drawings*

3:00 p.m. Second Feature Session
*"Ethical Issues in Managed Care:
A Practical Action Plan"*

6:00 p.m. Hospitality Hour

7:00 p.m. Inaugural Banquet

9:00 p.m. President's Reception
& Dance

SATURDAY, MAY 3, 1997

7:30 a.m. Council Meeting (Tentative)

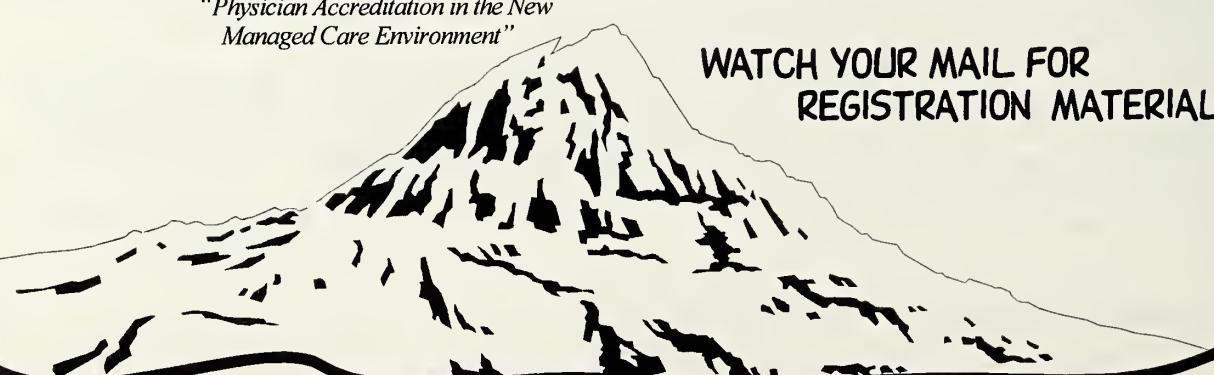
8:00 a.m. Early Morning Refreshments

8:45 a.m. Third Feature Session
*"Legislative Report from the
81st General Assembly"*

10:30 a.m. House of Delegates

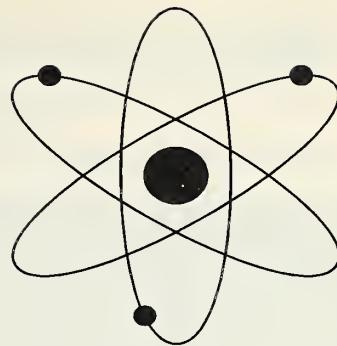
12:30 p.m. Specialty Meetings
*Arkansas Academy of Family Physicians
Arkansas Urologic Society
Arkansas Pathology Society*

WATCH YOUR MAIL FOR
REGISTRATION MATERIALS



Radiological Case of the Month

David Harshfield, M.D., Editor



Authors

George W. Christy, M.D.
David Harshfield, M.D.

History:

The patient is a 67-year-old male who was referred for evaluation of peripheral vascular disease. He has known coronary disease and underwent coronary artery bypass grafting in June of 1995. His peripheral vascular disease had been asymptomatic until January of 1996. He was seen in evaluation at a Dallas/Fort Worth hospital and had aorto-bifemoral bypass surgery recommended. The patient now presents for a second opinion.

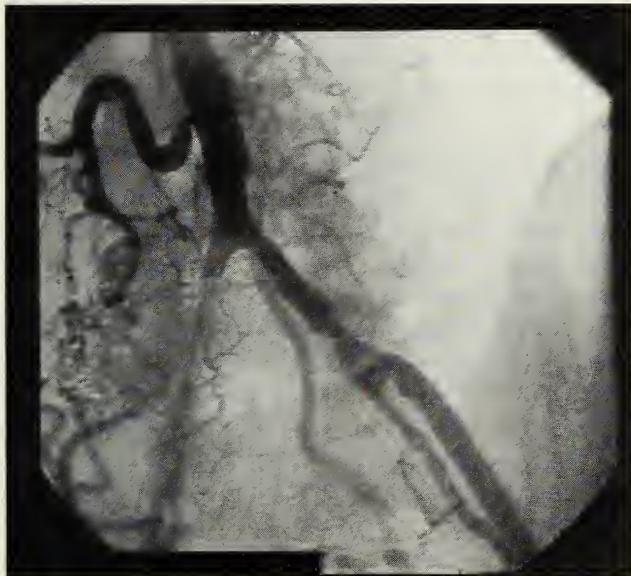


Figure 1

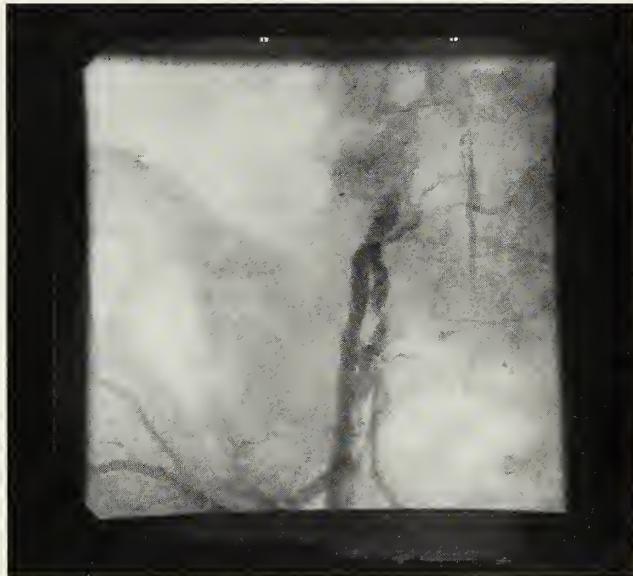


Figure 2

Angiographic findings:

The angiogram revealed a long segment (4 cm. length) occlusion of the right common iliac artery (figure 1). There was reconstitution of flow at the level of the right common femoral with no evidence of significant distal disease (figure 2). His left external iliac had a complex, ulcerated, 95% lesion at its distal portion with no significant distal disease (figure 1).

Bilateral Iliac Artery Atherosclerosis treated with Balloon Angioplasty and Stent Placement



Figure 3

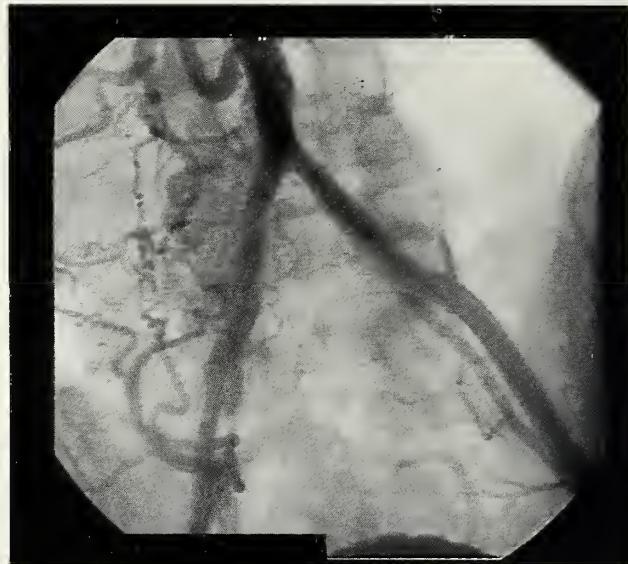


Figure 4

Diagnosis:

Bilateral Iliac Artery Atherosclerosis treated with Balloon Angioplasty and Stent Placement

Discussion:

Access was obtained in a retrograde fashion via both right and left common femoral arteries. A .035 inch Wholey wire was advanced retrograde through the left femoral artery sheath over the bifurcation and across the 100% occlusion of the right iliac artery. A .035 Terumo wire was exchanged for the Wholey wire and advanced through the 100% occlusion and externalized via the right common femoral artery sheath. A 5 French multi-purpose catheter was advanced retrograde over the Terumo wire through the right arterial sheath to the bifurcation. The Terumo wire was removed and a second .035 Wholey wire was advanced through the multi-purpose catheter to reside in the mid-aorta. Two, 7cm. by 4 mm. Match 35 Schneider balloon catheters were advanced retrograde via the respective femoral arterial sheaths to the levels of ipsilateral disease and pre-dilatation of both iliacs was achieved (figure 3). Bilaterally, 8 x 40 mm. Wallstents were advanced through the lesions and positioned at the bifurcation of the aorta. Then stents were sequentially deployed and, post implant, balloon inflation with an 8 mm. By 4 cm. Blue Max balloon catheter yielded the final angiographic result (figure 4). There were no complications encountered. Following the procedure the patient was transferred to the ward. The sheaths were removed and the patient was discharged the following day. The patient remains asymptomatic.

This case demonstrates alternative to intra-abdominal revascularization surgery. The techniques can be applied to selected patients and can be completed safely, with very low risk and excellent long-term patency.

Conclusion:

We have extensive experience in conventional angiography with percutaneous balloon angioplasty in general and specifically in the treatment of focal iliac artery lesions. Focal (short segment) lesions of the iliac artery have a high technical and clinical success rate when treated with balloon angioplasty alone (without stents). Heretofore, we have not been particularly successful in treating long segment stenoses or chronic occlusions with angioplasty alone. Recent research in utilization of intravascular stents indicates there is marked improved patency rate of these complex lesions which historically have had a very low success rate with angioplasty alone. The conclusion arrived at by Murphy et al¹ in a recent manuscript was as follows:

"Technical success and complication rates for percutaneous iliac artery revascularization with use of Wallstents are favorable, symptoms improved in the majority of patients and excellent secondary patency can be achieved. With use of Wallstents, most patients with iliac artery insufficiency as a result of long segment disease or chronic occlusions can be treated percutaneously."

Three years ago, the FDA authorized a phase II, multi-center trial involving 13 institutions which also reported promising results comparing the Wallstent (which has been used in Europe since 1987, but has not been DDA approved in the United States) with the Palmaz stent (currently FDA approved in the U.S.) in the iliac system.

Martin et al², in the Journal of Vascular and Interventional Radiology, published the multi-institutional trial results in 1995. The indications for stent placement in the iliac system were: 1.) unsatisfactory angioplasty, 2.) complete occlusions, and 3.) restenosis within 90 days of a previous angioplasty. The mean length of occlusions treated was 6.6cm (range, 1 to 13cm) and the mean length of stenosis was 3.0cm (range, 0.2 to 18cm). The initial procedural (technical) success rate was 97%. The primary clinical patency was 81% at 1 year and 71% at 2 years. The secondary clinical patency rate was 91% and 86%, respectively. The secondary patency rate refers to patency of a stent which required a secondary intervention after the original placement procedure.

Long, et al³ utilizing the Wall-stent in Europe, reported a primary angiographic patency rate of 85% and a secondary patency of 95% at one year in the iliac system. Vorwerk and Gunther⁴ reported a primary success rate in iliac occlusions with a 6 month clinical patency of 93%. These researchers initially reported their primary success rate in crossing occlusions was 70%, however, more recently, their technical success rate has increased to 92% through greater experience with occluded lesions.

It is clear that there is continuing improvement in stent technology for intravascular uses. Along with advancing technology, we as interventionalists, are gaining experience, not only in the technical skills of placing intravascular stents, but just as importantly, in selecting appropriate lesions. We are no longer limited to short segment lesions but are now able to achieve high technical and clinical success rates with long segment disease and chronic arterial occlusions.

Bibliography:

1. Timothy Murphy, et al. Percutaneous revascularization of complex iliac artery stenosis and occlusions with use of Wallstents. JVIR 1996;7:21-27.
2. Eric Martin, et al. Multicenter trial of the Wallstent in the iliac and femoral arteries. JVIR 1995;6:843-849.
3. Long AL, Page PE, Raynaud AC, et al. Percutaneous iliac artery stent: angiographic long-term follow-up. Radiology 1991;180:771-778.
4. Vorwerk D, Gunther RW. Mechanical revascularization of occluded iliac arteries with use of self-expandable endoprostheses. Radiology 1990;175:411-415.

Further Reading:

Zollinger CL, Antonucci F, Markus P, et al. Arterial stent placement with use of the Wallstent: midterm results of clinical experience. Radiology 1991;179:449-456.

Author: George W. Christy, M.D., is a Fellow of the American College of Cardiology and a member of the Cardiovascular Diseases clinic in Little Rock.

Editor of manuscript/Author of conclusion: David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

In Memoriam

Jerry C. Chapman, Sr., M.D.

Dr. Jerry C. Chapman, Sr., of Cabot died Saturday, January 11, 1997. He was 54. He is survived by his mother, Mrs. R.B. Chapman of Millington, Tenn.; his wife, Phylis Diane Chapman; one son and daughter-in-law, Jerry Chalmas (Jace) Chapman Jr. and Stephanie C. Chapman, of Cabot; two daughters and one son-in-law, Melanye L. Weir and Bradley Weir of Cabot, Lark Buckingham of Cabot; one sister and brother-in-law, Dona Rae Boyter and James T. Boyter of Austin, Ky.; two grandchildren, Joshua Colbye (JC) and Kyle Lee.

Resolutions

Eaton Wesley Bennett, M.D.

WHEREAS, the members of the Pulaski County Medical Society are saddened to learn of the recent death of an esteemed member, Eaton Wesley Bennett, M.D.; and

WHEREAS, he was a loyal member of this organization for many years; and

WHEREAS, his love for his country was evidenced by distinguished service in the Army Medical Corps, for which he was awarded the Bronze Star; and

WHEREAS, Dr. Bennett will be remembered by his peers and patients alike as a caring and competent physician;
BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the archives of this Society; and

THAT, a copy of this resolution be sent to Dr. Bennett's family as an expression of our genuine sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Allen Carruth Hill, M.D.

WHEREAS, the membership of the Pulaski County Medical Society notes with heart-felt sorrow the untimely death of a respected member, Allen Carruth Hill M.D.; and

WHEREAS, Dr. Hill demonstrated his devotion to medicine by loyal membership in this and numerous other professional organizations; and

WHEREAS, the compassion and concern that were the hallmarks of Dr. Hill's practice will live on in the minds of his many patients, friends and colleagues;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the permanent files of this Society; and

THAT, a copy of this resolution be sent to Dr. Hill's family as a token of our sincere sympathy; and

THAT, a copy of this resolution be made available to *The Journal of the Arkansas Medical Society* for publication.

William Payton Kolb, M.D.

WHEREAS, the members of the Pulaski County Medical Society observe with heart-felt sorrow the recent death of one of our most respected and loved members, William Payton Kolb, M.D.; and

WHEREAS, Dr. Kolb was an active and faithful member of this Society for forty-eight years, serving in numerous positions of leadership including that of President in 1965; and

WHEREAS, Dr. Kolb's concern for his patients and for society at large was manifested through active and enthusiastic service on behalf of Lions World Services for the Blind, the Arkansas Teenage Suicide Commission, Pulaski Heights Baptist Church and numerous other civic organizations; and

WHEREAS, Dr. Kolb was a tireless advocate for the advancement of Psychiatry, constantly lobbying state and national legislators for increased funding and services for the mentally ill; and

WHEREAS, Dr. Kolb's life of faith in God and service to others will stand as an enduring example to his fellow men;
BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the permanent files of this Society; and

THAT, a copy of this resolution be sent to Dr. Kolb's family as a token of our sincere sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

All Resolutions Adopted
Board of Directors
January 22, 1997

By Order of the Memorials Committee
Fred O. Henker, III, M.D., Chairman
James W. Headstream, M.D.
Bruce E. Schratz, M.D.

Things To Come

April 4-5

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 10-12

Refresher Course & Update in General Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

April 11-13

Infectious Disease 97: A Comprehensive Review for the Practicing Physician. Renaissance Washington D.C. Hotel - Downtown. Sponsored by the Center for Bio-Medical Communication, Inc. For more information, call (201) 385-8080.

April 17-20

National Kidney Foundation 6th Annual Spring Clinical Nephrology Meetings Consultative Nephrology Program. Wyndham Anatole Hotel, Dallas, Texas. For more information, call 1-800-622-9010.

April 24-26

14th Annual Dermatology Update and All That Jazz. Hyatt Regency Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center Department of Dermatology and the Center for Continuing Education. For more information, call (504) 588-5466 or 1-800-588-5300.

April 25-27

1997 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Co-sponsored by the Alton Ochsner Medical Foundation and Tulane University School of Medicine. For more information, call (504) 842-3702 or 1-800-778-9353.

May 1-3

Arkansas Medical Society Annual Session - Scaling New Heights. Arlington Hotel, Hot Springs. For more information, call 1-800-542-1058 or 501-224-8967.

May 8-10

Ambulatory Surgery '97: Sharing Our Experiences FASA 23rd Annual Meeting. Marriott Copley Place Hotel, Boston, MA. For more information, call (703) 836-8808.

May 21-24

National Rural Health Association 20th Annual National Conference: Caring for the country...Partnerships for Health. Westin Hotel, Seattle, Washington. For more information, write to NRHA, One West Armour Boulevard, Suite 301, Kansas City, Missouri, 64111.

July 7-10

17th Annual Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by UC Davis School of Medicine and Medical Center, Division of Cardiovascular Medicine and Office of Continuing Medical Education. For more information, call (916) 734-5390.

September 5-7

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

October 26-30

1997 State-of-the-Art Conference: Occupational and Environmental Medicine. Nashville, Tennessee. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (847) 228-6850, ext. 152.

Keeping Up

April 3-5

Symposium on Critical Care and Emergency Medicine. Time: Registration at 7:00 a.m. Location: Hot Springs Hilton, Hot Springs. Accrediting organization sponsoring program: jointly sponsored by the University of Tennessee at Memphis College of Medicine and the University of Arkansas for Medical Sciences. Hours of Category 1 credit offered: 11.25. For more information, call 501-661-7962.

April 19

ACLS 1 Day Recert Course. Time: 7:30 a.m. to 5 p.m. Location: St. Vincent Infirmary Medical Center, Center for Health Education. Sponsor: St. Vincent Infirmary Medical Center. Hours of Category 1 credit offered: 8. For more information, call 501-660-3678.

April 19

Primary Care Cardiology Update '97. Time: 8 a.m. to 2 p.m.. Location: Clarion Inn, Fayetteville. Sponsor: Washington Regional Medical Center. Hours of Category 1 credit offered: 6. Fee: none. For more information, call 501-442-1823 or 1-800-422-0322.

April 26

Contemporary Cardiology Update. Time: 8 a.m. to 1 p.m.. Location: St. Vincent Infirmary Medical Center, Center for Health Edu-

cation. Sponsor: St. Vincent Infirmary Medical Center. Hours of Category 1 credit offered: 4.50. Fee: none. For more information, call 501-660-3594.

May 1-2

ACLS 2 Day Provider Course. Time: 7:30 a.m. - 5 p.m.. Location: St. Vincent Infirmary Medical Center, Center for Health Education. Sponsor: St. Vincent Infirmary Medical Center. Hours of Category 1 credit offered: 16. For more information, call 501-660-3678.

May 30 - June 1

19th Annual Family Practice Intensive Review. Location: UAMS, Education II Building, Little Rock. Program Presenters: Department of Family and Community Medicine. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: Up to 20 hours of CME credit. Fee: TBA. For more information, call 501-661-7962.

October 3 - 5

Primary Care Update (Management of Top 20 Ambulatory Diagnoses). Location: Gaston's Lodge on the White River. Sponsor: Washington Regional Medical Center. For more information, call 501-442-1823 or 1-800-422-0322.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

*General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3*

FAYETTEVILLE-WASHINGTON REGIONAL MEDICAL CENTER

*Cardiology Conference, 3rd Wednesday of every month, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided
Chest Conference, 1st Wednesday of every month, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Primary Care Conferences, every Monday, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Tumor Conference, every Thursday, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided*

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

*Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.*

LITTLE ROCK-BAPTIST MEDICAL CENTER

*Breast Conference, 3rd Thursday, 7:00 a.m., J.A. Gilbreath Conference Center, Room #20
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Disorders Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.*

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

*Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom*

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.
Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
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VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118

VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142

White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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Volume 93 Number 11

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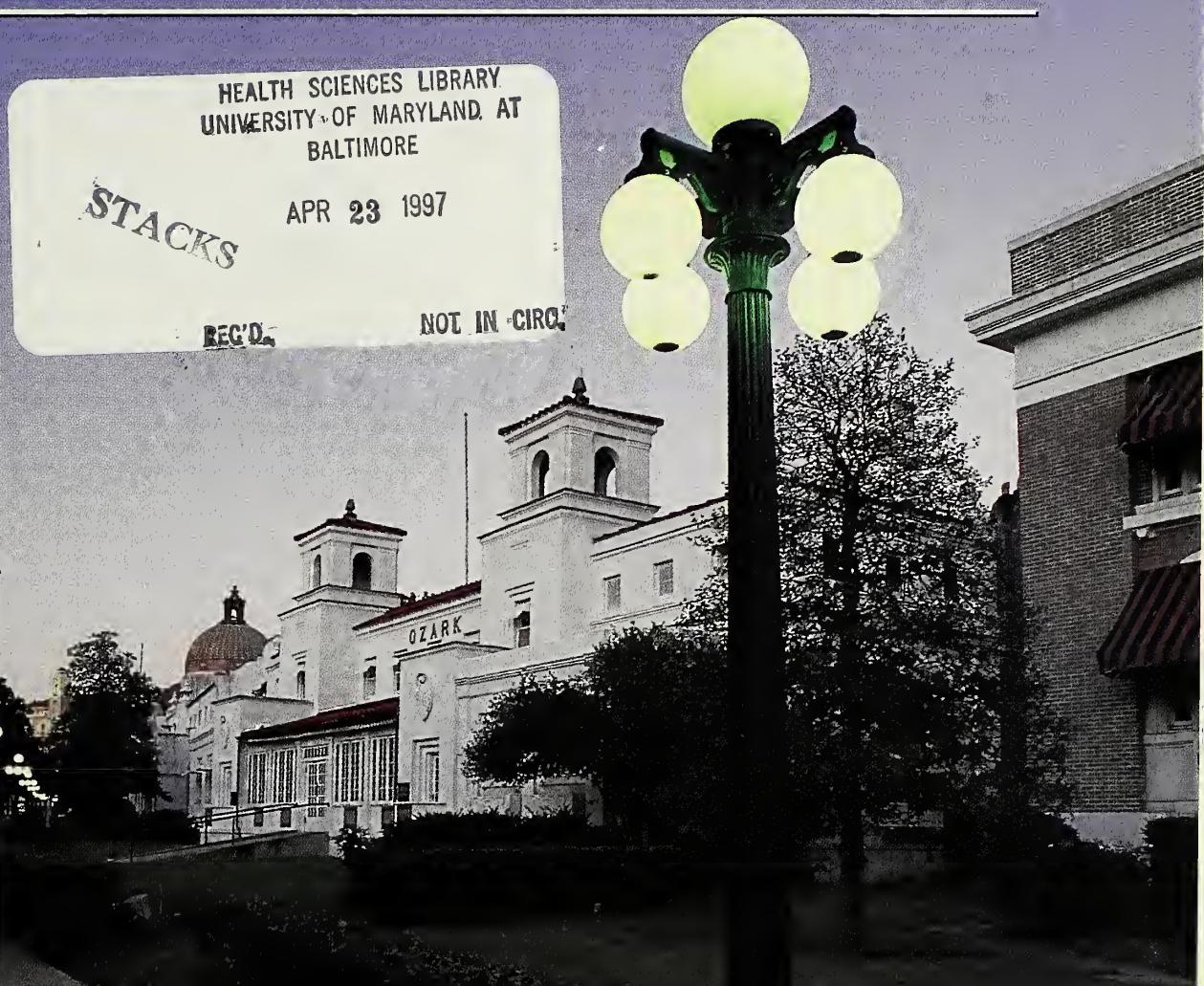
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Cover photograph taken by Matt Bradley of Little Rock.

Medicine in the News

Health Care Access Foundation

As of March 1, 1997, the Arkansas Health Care Access Foundation has provided free medical service to 12,327 medically indigent persons, received 23,370 applications and enrolled 45,601 persons. This program has 1,748 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Influenza Immunization and Corneal Transplant Rejection

The "flu season is upon us, and many of our patients have received or will receive immunizations against influenza virus. Influenza vaccination has been reported to prevent illness in 70% of healthy persons under 65 years of age.¹ Furthermore, the vaccine is recommended for individuals at high risk for influenza complications, including the nearly 60 million elderly persons in the United States. Approximately 70 million doses of the attenuated virus vaccine were available during the 1995-1996 influenza season.² Last year Nichol et al³ reported the efficacy and health related benefits following influenza vaccine in healthy working adults.

We wish to caution readers regarding a potential complication of influenza vaccine. Several years ago we reported the association of corneal transplant rejection and immunization occurring in five patients.⁴ Four of these patients developed corneal transplant rejection within several weeks following influenza immunization. Two of the four corneal transplant rejection episodes resolved following intensive corticosteroid therapy. Recently, Solomon and Frucht-Pery⁵ reported a patient who experienced a bilateral corneal transplant rejection six weeks after influenza vaccination. The graft reactions were treated successfully with oral and topical corticosteroids. Several months later the patient again received an influenza vaccination, but topical steroid therapy was increased during the month following immunization. The corneal transplants remained clear fourteen months after the bilateral transplant rejection episode.

Clearly, the reported association between corneal transplant rejection and influenza immunization is temporal and presumptive. However, the occurrence of this phenomenon may be more frequent than reported, and we believe that primary care physicians, ophthalmologists, and patients alike need to be aware that immunization may potentiate a threat to the health of a corneal transplant. Patients with corneal transplants

should be treated with increased topical steroids both before and after immunization.

Authors:

*Thomas L. Steinemann, M.D., Associate Professor, Cornea and External Disease Services, Jones Eye Institute, Department of Ophthalmology, UAMS.

*Bruce H. Koffler, M.D., Clinical Associate Professor, University of Kentucky, Department of Ophthalmology, Lexington, Kentucky.

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AMA Launches New Coalition for Tobacco-free Investments - Growing number of U.S. funds kick the habit

American investors are kicking the habit, according to the American Medical Association (AMA), which on March 4, 1997, launched a new coalition of tobacco-free mutual funds that have pledged not to invest in 17 identified tobacco stocks.

"The societal sea change against tobacco has the AMA's Coalition growing by the day," said Randolph Smoak, Jr., M.D., AMA secretary-treasurer. "Investors are refusing to allow their hard-earned money to support an industry whose product causes suffering, addiction and death."

The AMA's "Coalition for Tobacco-free Investments" is a group of 53 U.S. mutual funds that do not hold tobacco investments and have pledged not to purchase tobacco stocks and bonds in the future. Its membership includes Stein Roe's Young Investor Fund, which targets America's new generation of investors, as well as institutional investors such as the American Hospital Association Investment Program.

"Our clients see tobacco investments as a stark contradiction to their mission in a world where much of their time and resources are spent caring for patients

suffering from tobacco-related diseases," said Tim Solberg of the American Hospital Association's Investment Program.

In April 1996, the AMA called tobacco a "ruinous and enslaving product that has brought misery, disease, anguish and death," and urged investors to divest of tobacco stocks and 1,474 mutual funds identified as invested in the manufacture or processing of tobacco products or tobacco companies. Since then, the AMA has invited all mutual funds traded in the U.S. to make the tobacco-free pledge and join the AMA's Coalition.

"Being part of the AMA's Coalition broadens our reach to a special group of shareholders who are concerned about health and are conscientious investors," said Dave Brady, vice president of Stein Roe's Young Investor's Fund. "Being recognized by a prestigious organization like the AMA can only help our fund."

Members of the Coalition are authorized to use the "AMA Coalition for Tobacco-free Investments" logo and will have their names published annually in the AMA's national publications and on the Association's World Wide Web site.

"We see this as a service to our members, public health advocates, medical institutions, and others who are interested in the health and welfare of our children," said Smoak. "We intend to continue to build this list of tobacco-free funds so that investors will eventually have hundreds of options."

The AMA list of tobacco stocks is derived from a universe of tobacco equities tracked by the Investor Responsibility Research Group (IRRC), a non-for-profit, independent research firm, based in Washington, D.C. The firm identified 17 tobacco manufacturers traded in the U.S. exchanges: American Brands; B.A.T Industries PLC; Brooke Group Ltd.; Caribbean Cigar Corp.; Consolidated Cigar; Culbro Corp.; DiMon, Inc.; Empresas La Moderna; Loews; Mafco Consolidated Group, Inc.; Philip Morris Cos., Inc.; RJR Nabisco Holding Corp.; Sara Lee Corp.; Schweitzer-Maudit Intl.; Standard Commercial Corp.; UST, Inc.; Universal Corp.

AMA's call for divestment of tobacco stocks and mutual funds follows its decision in 1986 to divest tobacco stocks in the AMA's portfolio. Other public health organizations that divested during the 1980's included the American Heart Association, American Lung Association and the American Cancer Society.

Since the AMA's latest call in April, more attention has focused on tobacco investments. The Massachusetts House of Representatives approved divestment legislation for the state employees' \$17 billion Public Retirement Investment Trust. Also, the \$55 billion New York State Teachers' Retirement System sold nearly \$100 million of tobacco stocks to "underweight" its financial exposure. And currently, other pension

funds like the \$45 billion New York City Employees' Retirement System are reviewing their tobacco stock holdings now.

"We appear to be entering a third phase of tobacco divestment activity," said Doug Cogan of the IRRC. "Public health associations like the AMA were among the first to shun tobacco investments in the 1980s, followed by some large universities with medical schools in the early 1990s. Now that attention is turning to mutual funds and pension fund investments in tobacco, the equity capital at stake is greater than ever."

The AMA does not endorse any investment vehicle and does not guarantee any rate of return. - *Information provided by the AMA Fed-Net dated March 4, 1997.*

ACR Continues Support of Mammography Screening For Women 40-49, Says NIH Panel Misread Data

The American College of Radiology (ACR) recently reaffirmed its strong support for mammography screening for women in their 40s and said that a National Institutes of Health Panel failed to recognize and incorporate into its report important new follow-up data from clinical trials that confirms the benefits of this test.



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The College also said that the panel's decision not to recommend screening mammography for women 40-49 was regrettable and not in the best interest of American women in this age group.

Two independent studies from Sweden, one from Gothenburg the other from Malmo, reported at the meeting a statistically significant decrease in the breast cancer death rate of 44% and 36% respectively for women who began screening in their 40s.

The NIH Consensus Panel has stated that after considering information from numerous studies it did not find sufficient evidence to warrant screening mammography for women aged 40-49.

ACR, on the other hand, pointed out that not only did randomized trials around the world show a statistically significant benefit, but numerous other studies involving hundreds of thousands of women have shown that with mammographic screening the breast cancer death rate can be reduced substantially.

For the past two years, the National Cancer Institute (NCI) has reported that the mortality rate from breast cancer has dropped for all age groups, including those 40-49. This is the first time in 40 years there has been a decline and NCI has concluded that this decrease is due, in part, to breast cancer detection with screening mammography. It is ironic that the NCI decision came so soon after such recent good news concerning the fight against breast cancer in the United States and around the world.

Not only is the evidence compelling that this age group should be screened, but a growing number of studies clearly indicate the screening interval for women 40-49 should be shortened from the present recommendation of every 1-2 years to every year. Since NCI has clearly indicated it will not be involved with guidelines, in the very near future, numerous national health care groups plan to meet to address the issue of yearly mammography screening in this age group and to give more guidance to women in their 40s.

Since NCI withdrew its support for screening women in their 40s more than three years ago, ACR and more than 20 other national medical organizations and women's groups have continued to support screening this age group. More than 30,000 women in the United States aged 40-49 are diagnosed with breast cancer each year and to discourage women in their 40s from having life-saving mammography is a tragic mistake. - *Information provided by the American College of Radiology via news release.*

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or sus-

pended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, the Board routinely suggests this list be shared with the appropriate supervisory personnel and recruiters in your organization. At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: February 14, 1997

*Nancy Susan Isch, RN 44280 (Conway) Reinstated followed by 1 year suspension

*G. Douglas Hall, LPN 30049 West Memphis (Brookland, AR) Suspension - 5 years; Civil penalty - \$1,500.

*Tracy Lynn Whitlock Mason, LPN 30698 McCrory (Bald Knob, AR) Suspension - 2 years; Civil penalty - \$2,500.

*Leigh Ann Benton, RN 39923 (Pine Bluff) License renewed followed 3 years suspension; Civil penalty - \$2,500.

*Sharon Kay Howard Dozier, LPN 5732 (Hampton, New Hampshire) Consent agreement; probation - 6 months; Civil penalty - \$500.

*Sally Jean Robbins, RN 53509 (Perryville) Allowed to endorse; consent agreement; probation - 3 years.

VOLUNTARY SURRENDER:

*Christopher Allen Sullivan, LPN 31472 (Cabot) 1/13/97

*Jerry Lee Keister, LPTN 537 (Jacksonville) 2/4/97

*Melissa Ann Hamilton, RN 51996 (Pine Bluff) 2/5/97

ALERT:

If you have employed the following nurses or have any knowledge of their whereabouts, please notify the Board of Nursing at (501) 686-2700.

*Judy Fox, LPN 17755

*Paula Johnson, LPN 12394

NORTHEASTERN ARKANSAS - Outstanding Family Practice opportunity in new outpatient facility. Work Monday through Friday, 8 a.m. to 5 p.m. with **no call** and **no inpatient** responsibilities. Highly competitive salary with excellent bonus potential. 45 minutes to Memphis. **Contact Sherry Andrews at 1-800-546-0954, ID# 4862JA, Fax: 1-314-726-3009, E-mail: careers@cejka.com**

Medicare Post Pay Review Audits

EFFECTIVE JANUARY 1, 1997, THE FEDERAL GOVERNMENT WILL STEP UP THEIR EFFORTS TO IDENTIFY CODING VIOLATIONS AND CONSIDER FRAUD AND ABUSE CHARGES AGAINST PHYSICIANS.
IT IS THE DOCTOR'S RESPONSIBILITY TO KNOW — OR LEARN — ACCURACY.

Can your office manager profile your practice?

(Good idea to ask that question now.)

Ever been audited by Medicare/Medicaid?

!!!!!!NOT FUN!!!!!!

Texas Doctor Goes To Jail, Re-Pays Medicare \$, \$\$, \$\$. (Houston Chronicle)
Office Manager (Wife) Indicted as Co-Conspirator

**Arkansas Doctor Told to Re-Pay Medicare
\$900,000 in 30 days. (could you?)**

*Let us “Profile” your practice
and you will avoid the possibility of the above problems.*

- We will show you how your practice compares to your peer group.
- Verify your level of service coding process.
- Insure that you are not violating “volume screens.”
- Determine your ranking among your peer group specialty.

Call our Senior Consultant, Donald Smith, today.
He worked for Arkansas BCBS & Medicare for five years.

Achieve EXCELLENCE through Experience, Knowledge and Accuracy.

*Join the many clients of Medical Practice Consultants, Inc. and enjoy their success.
Call MPC, Inc. 501-972-1200 TODAY for immediate assistance.*

Medical Practice Consultants, Inc.

1400 Fairway Drive • Jonesboro, Arkansas 72401 • 501-972-1200
Donald B. Smith, Senior Consultant • Member, MGMA
Thomas L. Stickel, Associate Consultant
C. Scott Winingham, Marketing Consultant

AMS Newsmakers

Dr. Omar Atiq, a Pine Bluff oncologist/hematologist, recently returned from his native land of Peshawar, Pakistan, where he is assisting with the establishment of an adult leukemia clinic. Dr. Atiq is serving as a United Nations consultant as part of the U.N.'s Transfer of Technology to Developing Nations.

Dr. Charles Horton, a family practitioner of Berryville, was recently appointed to serve on the Arkansas Managed Care District II Consortium Board for Ryan White Funding. This group is one of five in Arkansas formed to handle a variety of HIV/AIDS and support services needed throughout the state. In addition, the Ozarks AIDS Resources and Services (OARS) group awarded Dr. Horton with a certificate of appreciation for donating thousands of hours to the OARS HIV/AIDS Clinic.

Dr. Robert Miller, a family practitioner of Helena, was recently elected president of the Arkansas Department of Health's board of directors for 1997. He will also serve on the board's executive and rural health committees.

Dr. Kerry Pennington, a family practitioner of Warren, was recently named to the board of trustees at Central Baptist College to serve a second five-year term.

Dr. Trent Pierce, a family practitioner of West Memphis, was recently appointed by Gov. Mike Huckabee to the Arkansas State Medical Board. He will serve through December 31, 2004.

Dr. F. Hampton Roy, of Little Rock, was recently elected President of the American College of Eye Surgeons.

Dr. Joe Shelton, a general practitioner, was recently honored with a reception at the Little River County Courthouse and a plaque from Little River Memorial Hospital for over 50 years of service and dedication to the citizens and medical community. He retired at the end of 1996.

Send your accomplishments and photo for consideration in *AMS Newsmakers* to: Arkansas Medical Society, Journal Editor, PO Box 55088, Little Rock, AR 72215-5088

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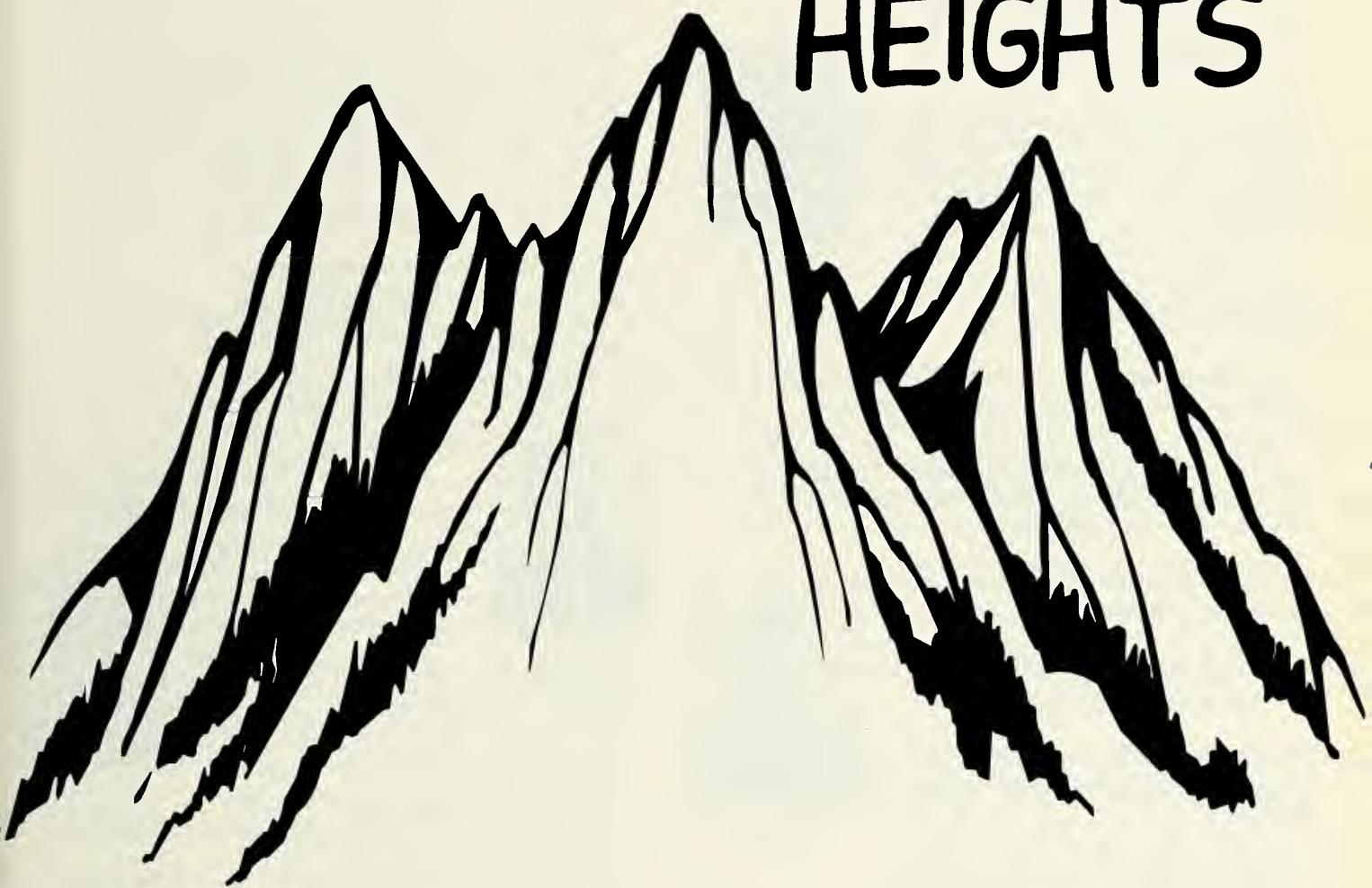
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ARKANSAS MEDICAL SOCIETY
CONVENTION REGISTRATION

SCALING NEW HEIGHTS



1997 ANNUAL CONVENTION
ARLINGTON HOTEL HOT SPRINGS, ARKANSAS
MAY 1-3, 1997

121ST AMS ANNUAL SESSION

SCALING NEW HEIGHTS



MAY 1-3, 1997

ARLINGTON HOTEL HOT SPRINGS, ARKANSAS

TARGET AUDIENCE

This meeting is designed primarily for Arkansas physicians concerned with health care issues that affect the practice of medicine. Clinic managers, medical students, residents and other health care professionals will also benefit from this program.

PROGRAM OBJECTIVES

- *Summarize the activities of the AMA and learn how changes on a national level will affect the practice of medicine.
- *Learn to minimize costly mistakes when joining a group or entering solo practice, including how managed care affects revenue and patient management.
- *Examine the physician accreditation programs from a state and national perspective.
- *Discuss the values physicians want to preserve and a positive plan for preserving those values.
- *Identify changes made in state law from the recent Arkansas General Assembly which will affect patients and the practice of medicine.
- *Network and exchange ideas with colleagues.

CME HOURS

St. Joseph's Regional Health Center is accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. St. Joseph's Regional Health Center designates this continuing medical education activity for 7.5 credit hours in Category I of the Physician's Recognition Award of the American Medical Association.

CONVENTION SCHEDULE

THURSDAY, MAY 1, 1997

- | | |
|------------|--|
| 9:00 a.m. | Dr. Harold "Bud" Purdy Memorial Golf Tournament
Hot Springs Country Club
<i>Sponsored by Schering Corporation</i> |
| 11:30 a.m. | Fifty Year Club Luncheon |
| 12:30 p.m. | Registration Opens |
| 1:00 p.m. | Seminar for Young Physicians
"Getting Started in Medical Practice"
Art Votek
Conomikes Associates
Los Angeles, California |

Art Votek is a Senior Staff Associate for Conomikes Associates. He will lead this informative seminar which is designed for residents and other physicians who may be joining a group, HMO or going solo. The seminar will help minimize costly mistakes and include such issues as buy-sell; salary and income distribution, employment agreements, revenue and managed care.

- | | |
|-----------|--|
| 2:00 p.m. | Council Meeting |
| 3:30 p.m. | Welcome Reception
Exhibits Open
<i>Sponsored by Boatmen's National Bank of Arkansas</i> |

- | | |
|-----------|---|
| 5:00 p.m. | House of Delegates
<i>Keynote Speaker</i>
Randolph D. Smoak Jr., MD
Secretary-Treasurer
American Medical Association
Orangeburg, South Carolina |
|-----------|---|



Randolph D.
Smoak Jr., MD
Orangeburg, SC

Dr. Randolph D. Smoak Jr. is a general surgeon from Orangeburg, South Carolina, and he was elected Secretary-Treasurer of the American Medical Association (AMA) in December 1995. He has been reelected to a second term on the AMA Board of Trustees in June 1995. Since 1994, Dr. Smoak has served on the Board's Executive Committee and as chair of its Finance Committee.

- | | |
|-----------|---|
| 6:00 p.m. | Opening Night Reception
Physicians, spouses, guests, exhibitors and sponsors are invited.
<i>Co-sponsored by Blue Cross Blue Shield of Arkansas and Southern Medical Association</i> |
|-----------|---|

FRIDAY, MAY 2, 1997

- | | |
|-----------|--|
| 7:30 a.m. | Council Meeting |
| 8:30 a.m. | Continental Breakfast
Exhibits Open
<i>Sponsored by First Commercial Bank</i> |
| 9:30 a.m. | Reference Committee Meeting I & II |

CONVENTION SCHEDULE

10:30 a.m.

- First Feature Session**
"Physician Accreditation in the New Managed Care Environment"
- Panel Discussion**
- Michael N. Moody, MD
 Arkansas Foundation for Medical Care
 Salem, Arkansas
- Randolph D. Smoak Jr., MD
 AMA Commissioner
 Joint Commission on Accreditation of Healthcare Organizations
 Orangeburg, South Carolina
- Carol Zylman
 Centralized Credentials Verification Service Committee
 Little Rock, Arkansas
 Arkansas State Medical Board
Educational grant given by The St. Paul Companies

Michael N.
 Moody, MD
 Salem, AR

Dr. Michael N. Moody is a board-certified family physician practicing at the Salem Family Clinic and is currently serving as Secretary of the Arkansas Medical Society. As medical director of the Arkansas Foundation for Medical Care, he is involved with the Arkansas Medicaid Primary Care Case Management program. He is currently serving on the Arkansas Board of Health.

Dr. Randolph D. Smoak Jr. has served in virtually every leadership position in the South Carolina Medical Association, including President. He is a fellow of the American College of Surgeons and is currently serving as Governor from South Carolina to the American College of Surgeons. Dr. Smoak is a diplomate of the American Board of Surgery.

12:00 p.m.

- Shuffield Lecture/Luncheon**
 The Honorable Vic Snyder, MD
 United States Congressman, Second District
 Little Rock, Arkansas
An educational grant given by Freemyer Collection System



The Honorable
 Vic Snyder, MD
 Little Rock, AR

Congressman Vic Snyder, MD was elected from the Second District to the United States Congress in November 1995. He is on the House Veterans' Affairs Committee and the National Security Committee. Congressman Snyder completed his residency in family practice at the University of Arkansas for Medical Sciences and received his Medical Degree from the University of Oregon. He has a Law Degree from the University of Arkansas at Little Rock School of Law.

1:30 p.m.

- Afternoon Break**
 Exhibits Open
Sponsored by State Volunteer Mutual Insurance Company

3:00 p.m.

- Second Feature Session**
"Ethical Issues in Managed Care: A Practical Plan of Action"
- Robert Lyman Potter, MD, PhD
 Bioethics Development Group
 Kansas City, Missouri



Robert Lyman
 Potter, MD, PhD
 Kansas City, MO

Dr. Robert Lyman Potter is from the Bioethics Development Group, a national division of the Bioethics Center. He has a private practice in internal medicine and is medical director for four nursing homes. Dr. Potter divides his time between practicing, teaching and ethics lecturing. Dr. Potter will present a program outlining the values which physicians want to preserve and then a positive plan for using bioethics as the mechanism for preserving those values. This program is a constructive response to ethical issues in managed care.

6:00 p.m.

- Hospitality Hour**

Sponsored by Janssen Pharmaceuticals

7:00 p.m.

- Inaugural Banquet**



Andy Childs
 Memphis, TN

9:00 p.m.

- President's Reception & Dance**

Sponsored by National Park Medical Center

Banquet Entertainment: Andy Childs

Childs has served as musical director and opening act for stars like Chubby Checker, Chuck Berry, Jerry Lee Lewis, Carl Perkins, Fabian, Frankie Avalon and many others. In 1993, Childs signed with RCA Records in Nashville. Childs has toured recently with Clint Black, Trisha Yearwood and Tanya Tucker.

SATURDAY, MAY 3, 1997

7:30 a.m.

- Council Meeting (tentative)**

8:00 a.m.

- Early Morning Refreshments**

Sponsored by American Investors Life Insurance Company

8:45 a.m.



Z. Lynn Zeno
 Little Rock, AR

- Third Feature Session**

"Legislative Report from the 81st General Assembly"

Z. Lynn Zeno
 Director of Governmental Affairs
 Arkansas Medical Society
 Little Rock, Arkansas

Z. Lynn Zeno, Director of Governmental Affairs for the Arkansas Medical Society, will update the AMS membership on the activities of the 81st General Assembly. Mr. Zeno will discuss insurance regulations, Medicaid, tort reform and other medical-related bills which were discussed and acted upon by the state legislature.

10:30 a.m.

- House of Delegates**

12:30 p.m.

- Specialty Meetings**

Arkansas Academy of Family Physicians
 Arkansas Chapter, American Academy of Pediatrics
 Arkansas Chapter, American College of Emergency Physicians
 Arkansas Pathology Society
 Arkansas Urologic Society

CONVENTION HIGHLIGHTS

DR. HAROLD "BUD" PURDY MEMORIAL GOLF TOURNAMENT

Tee off the convention by bringing your clubs to the Hot Springs Country Club on Thursday, May 1 at 9:00 a.m. The tournament will be a 4-person scramble and USGA rules will prevail. **The golf tournament is sponsored by Schering Corporation.**



WELCOME RECEPTION

Visit with your colleagues, spouses and exhibitors during the first exhibit time - just prior to the First House of Delegates and keynote address by Dr. Randolph D. Smoak Jr. **The reception is sponsored by Boatmen's National Bank of Arkansas.**

OPENING NIGHT RECEPTION

Enjoy good food, good fun and renew old friendships at the Opening Night Reception. **Co-sponsored by Blue Cross Blue Shield of Arkansas and Southern Medical Association.**

CONTINENTAL BREAKFAST

Enjoy breakfast while you visit with the 1997 exhibitors at their booths. Be sure to stop by every booth to qualify for the Grand Prize Drawing. **The breakfast is sponsored by First Commercial Bank.**

AFTERNOON BREAK

Take a break from the meetings to relax and talk with exhibitors. The Grand Prize will be drawn during the break ... so make plans to be there. **Sponsored by State Volunteer Mutual Insurance Company.**

HOSPITALITY HOUR

Prior to the Inaugural Banquet and President's Reception & Dance, visit with friends and family at the AMS Hospitality Hour. **The Hospitality Hour is sponsored by Janssen Pharmaceuticals.**

INAUGURAL BANQUET

Join us for a fabulous dinner at the Inaugural Banquet. Dr. Charles Logan of Little Rock will be installed as the 1997-98 AMS President.

PRESIDENT'S RECEPTION & DANCE

The Inaugural Banquet will be followed by the President's Reception & Dance. Entertainment will be by Andy Childs from Memphis, Tennessee. **The President's Reception & Dance is sponsored by National Park Medical Center.**

EARLY MORNING REFRESHMENTS

Stop by for breakfast on Saturday morning. Early Morning Refreshments are **sponsored by American Investors Life Insurance Company.**

OTHER ACTIVITIES

THE PRESIDENTS' CLUB

The Presidents' Club will meet Wednesday, April 30 at 6:30 p.m. at the Arlington Hotel. The group consists of presidents, president-elects and past presidents of the Arkansas Medical Society, county and specialty societies.

FIFTY YEAR CLUB LUNCHEON

The Society will host a luncheon for **The Fifty Year Club** at 11:30 a.m. on Thursday, May 1 at the Arlington Hotel.

SPECIALTY MEETINGS

Arkansas Academy of Family Physicians will meet at 12:30 p.m. at the Arlington Hotel on Saturday, May 3. Lunch reservations are necessary.

Arkansas Chapter, American Academy of Pediatrics will meet at 12:30 p.m. at the Arlington Hotel on Saturday, May 3.

Arkansas Chapter, American College of Emergency Physicians will meet at 12:30 p.m. at the Arlington Hotel on Saturday, May 3.

Arkansas Pathology Society will meet at 12:30 p.m. at the Arlington Hotel on Saturday, May 3.

Arkansas Urologic Society will meet at 12:30 p.m. at the Arlington Hotel on Saturday, May 3.

AMS ALLIANCE CONVENTION SCHEDULE

THURSDAY, MAY 1, 1997

2:00 p.m.	Pre-convention Board Meeting
3:30 p.m.	Welcome Reception
5:00 p.m.	AMS House of Delegates
6:00 p.m.	Opening Night Reception

FRIDAY, MAY 2, 1997

7:30 a.m.	Past Presidents' Breakfast
8:00 a.m.	Membership Roundtable Discussion
9:00 a.m.	Opening General Session
11:00 a.m.	Alliance Feature Session
12:00 p.m.	Shuffield Lecture & Luncheon
1:30 p.m.	Update from National
3:00 p.m.	Tennis Round Robin
5:00 p.m.	Walking Art Tour
6:00 p.m.	AMS Hospitality Hour
7:00 p.m.	AMS Inaugural Banquet
9:00 p.m.	AMS President's Reception & Dance

SATURDAY, MAY 3, 1997

9:00 a.m.	Second General Session/Update from SMAA
12:00 p.m.	Installation & Awards Luncheon
2:00 p.m.	Post-convention Board Meeting

IMPORTANT INFORMATION

MEETING REGISTRATION . . .



Return your meeting registration form by April 25, 1997, with a check (sorry, no credit cards) made payable to Arkansas Medical Society or AMS:

*Arkansas Medical Society
P.O. Box 55088
Little Rock, AR 72215-5088*

Refunds prior to April 25, 1997 will be at the full amount. Refunds after April 25, 1997 will be charged a \$10 processing fee which will be mailed after the convention.

NEED SPECIAL ASSISTANCE . . .

If you are a person with a disability or special needs, please let us know in advance so that we can arrange to make your attendance as convenient and comfortable as possible. Please call the Society office at (501) 224-8967 or 1-800-542-1058 to make arrangements.

SPOUSES AND GUESTS . . .

Spouses and guests are invited to attend the AMS annual convention for a registration fee of \$55. This allows access to all sessions, exhibit center and social activities.

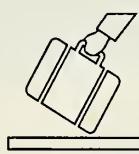


AMS ALLIANCE ACTIVITIES . . .

The AMS Alliance Annual Session is meeting in conjunction with the AMS Annual Session. Please consult the registration form for the fee involved.

HOTEL RESERVATIONS . . .

Hotel reservations can be made directly with the Arlington Hotel. Hotel deadline is April 9, 1997. After that date, AMS convention rates cannot be guaranteed.



\$75 Single/\$75 Double

*Arlington Hotel
PO Box 5652
Hot Springs, Arkansas 71902
(501) 623-7771*

MEETING ATTIRE . . .

General sessions, education programs and other daytime activities - business attire, but dress comfortably. Dress up for the Inaugural Banquet and President's Reception & Dance.

SCALING NEW HEIGHTS

1997 CONVENTION REGISTRATION FORM



Arkansas Medical Society
P.O. Box 55088, Little Rock, AR 72215-5088
(501) 224-8967 1-800-542-1058 (WATS)

Complete the registration form following steps 1 through 6 and return by mail with check to the AMS office. Pick up tickets and badge at the AMS Registration Desk on the Mezzanine Level of the Arlington Hotel.

1 (Please Print) Dr. _____ This is my first convention _____

Spouse _____

Guest _____

Address _____

City _____ State _____ Zip _____ Phone _____

2 For appropriate meal count, please indicate the number of physicians, spouses and guests attending:

_____ #Attending Shuffield Luncheon _____ #Attending AMS Inaugural Banquet

Registration Fees	Pre-Paid	On-Site
Member	\$90	\$125
Past President	\$70	\$105
*Resident/Spouse	\$5	\$10
*Medical Student/Spouse	\$5	\$10
Spouse	\$55	\$70
Guest	\$55	\$70
Non-member	\$110	\$145

*Resident/student/spouse fee does not include Inaugural Banquet Ticket, but reservations can be made through the Society office.

AMS Registration Includes:

- *Entrance into the Exhibit Center and Exhibit Center Breaks
- *CME Hours
- *Shuffield Luncheon
- *Social Events such as Opening Night Reception, Inaugural Banquet and President's Reception & Dance

Note: Spouse fee does not include Alliance Luncheon.

3 SEMINAR FOR YOUNG PHYSICIANS

Member	\$10	\$15
Non-Member	\$20	\$25

Seminar for Young Physicians Includes:

- *Workshop materials & CME hours
- *Thursday's Exhibits

4 DR. HAROLD "BUD" PURDY MEMORIAL GOLF TOURNAMENT

Per person \$60

Please list handicap: _____

5 ALLIANCE MEETING REGISTRATION FEE

	Pre-Paid	On-Site
AMSA Member	\$25	\$30
Tennis Round Robin	\$5	\$5

AMS Alliance Registration Includes:

- *AMSA Meeting & Activities
- *Installation Luncheon

6 Did you add the appropriate amounts to include member, spouse, guest and alliance activities?

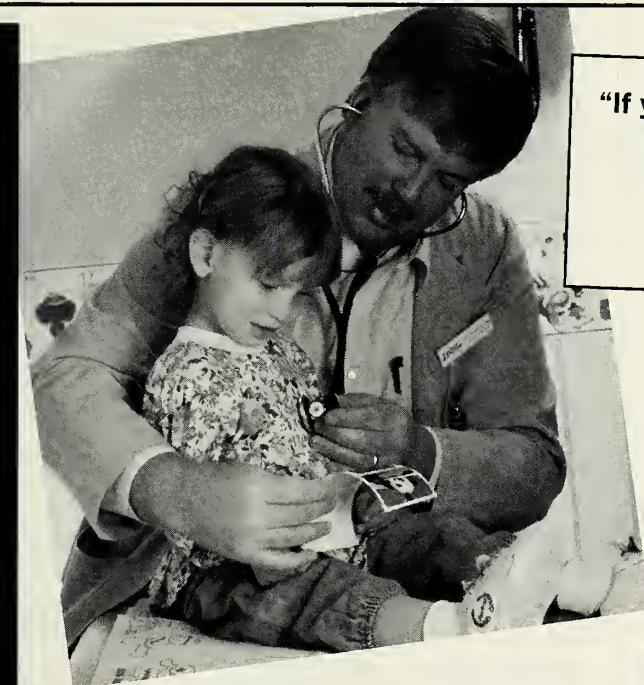
TOTAL AMOUNT ENCLOSED _____

Fifty Year Club Luncheon

The Fifty Year Club is composed of physicians who have held a license to practice medicine for fifty years. The Society will host a luncheon for members of the Fifty Year Club at 11:30 a.m., Thursday, May 1, 1997, at the Arlington Hotel in Hot Springs. Physicians eligible for the Fifty Year Club this year are:

John C. Baber, Jr., M.D., Little Rock
David S. Bachman, M.D., Dardanelle
H. A. Bailey, Jr., M.D., Little Rock
David L. Gibbons, M.D., Ozark
A. Meryl Grasse, M.D., Calico Rock
A. Vale Harrison, M.D., Little Rock
Frank M. James, M.D., Gage, Oklahoma
Kathleen C. Jones, M.D., Little Rock
Ralph F. Joseph, M.D., Walnut Ridge
J. F. Kelsey, M.D., Fort Smith

John W. Lane, M.D., Little Rock
Willie J. Lee, M.D., Hot Springs
Frank M. Lockwood, M.D., Fort Smith
James D. Mashburn, M.D., Fayetteville
William R. Meredith, M.D., Pine Bluff
J. Warren Murry, M.D., Fayetteville
Marvin C. Rhode, M.D., Pine Bluff
Boyd M. Saviers, M.D., Fort Smith
Jack A. Wood, M.D., Fayetteville



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*Call Liberty."***
— Bill Geserick, M.D.

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1997 House of Delegates

The opening session of the House of Delegates of the Arkansas Medical Society will begin at 5:00 p.m. on Thursday, May 1. Speaker of the House Anna Redman, M.D., will preside. All items of business to be considered by the House must either be printed in the convention issue of *The Journal* or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during the session of the House of Delegates must have a two-thirds vote of attending delegates for introduction.

Items of business will be referred by the Speaker of the House of Delegates to one of two reference committees. Open hearings on those items of business will be held by the reference committees on Friday, May 2 at 9:30 a.m. All members of the Society are welcome to attend the meetings of the reference committees and to express views on the various reports, resolutions, etc.

The following will be seated at the House of Delegates meeting during the 1997 Annual Session:

Officers

Anna Redman, Pine Bluff, Speaker, (ex-officio)
Kevin Beavers, Russellville, Vice Speaker,
(ex-officio)
John Crenshaw, Pine Bluff, President (ex-officio)
Charles Logan, Little Rock, President-elect
(ex-officio)
James Crider, Harrison, Vice President
(ex-officio)
Mike Moody, Salem, Secretary (ex-officio)
Lloyd Langston, Pine Bluff, Treasurer (ex-officio)

Councilors

District 1:	Joe Stallings, Jonesboro
	Dwight Williams, Paragould
District 2:	Lloyd Bess, Batesville
	Daniel Davidson, Searcy
District 3:	Hoy B. Speer, Jr., Stuttgart
	P. Vasudevan, Helena
District 4:	John O. Lytle, Pine Bluff
	Harold Wilson, Monticello
District 5:	Wayne Elliott, El Dorado
	Fred Murphy, Magnolia
District 6:	George Finley, Hope
	Michael Young, Prescott
District 7:	Robert McCrary, Hot Springs
	Brenda Powell, Hot Springs
District 8:	David Barclay, Little Rock
	Joseph Beck, Little Rock
	Paul Cornell, Little Rock
	Anthony Johnson, Little Rock
	William Jones, Little Rock
	Jerry Mann, Little Rock
	J. Mayne Parker, Little Rock
	Bruce Schratz, NLR
	Samuel Welch, Little Rock
	John L. Wilson, Little Rock

District 9:

Carlton Chambers, Harrison
Anthony Hui, Fayetteville
William McGowan, Springdale
Gerald Stoltz, Russellville
John Swicegood, Fort Smith
Paul Wills, Fort Smith

District 10:

Past Presidents (ex-officio)

A. E. Andrews, Jr., Texarkana
C. Stanley Applegate, Jr., Springdale
Glen F. Baker, Little Rock
John P. Burge, Lake Village
Asa A. Crow, Paragould
C. Randolph Ellis, Malvern
Ross E. Fowler, Harrison
Charles R. Henry, Sr., Little Rock
Morriess M. Henry, Fayetteville
John M. Hestir, DeWitt
William N. Jones, Little Rock
W. Ray Jouett, Little Rock
Albert S. Koenig, Jr., Fort Smith
James M. Kolb, Jr., Russellville
Kemal E. Kutait, Fort Smith
J. Larry Lawson, Paragould
Ken Lilly, Fort Smith
C. C. Long, Fort Smith (Honorary)
Joseph A. Norton, Little Rock
Ben N. Saltzman, Mountain Home
Purcell Smith, Jr., Little Rock
H. W. Thomas, Dermott
T. E. Townsend, Pine Bluff
George Warren, Little Rock
James R. Weber, Jacksonville
Charles F. Wilkins, Jr., Russellville
John P. Wood, Mena
George F. Wynne, Warren

Ex-officio members shall have the power of voting on all subjects except the election of officers.

Delegates for 1997 as submitted by county:

County	Delegate	Alternate Delegate	Pulaski (<i>cont.</i>)		Laurie Barber Joe Buford Jeff Carfagno Roger Clark Byron Curtner David Dean Gilbert Dean Gregory Dwyer Sidney Eudy Jay Flaming Eric Fraser David Gilliam A. T. Gillespie Michael Glidden Lawson Glover James Hagler Ed Hankins Thomas Hart T. S. Harris Tim Hodges Jerry Holton Harold Hutson Ben Johnson Dianne Johnson John Jones Joan Kyle Kenneth Martin John Meadors Keith Mooney James Morse David Mumme James Norton Michael Roberson Ian Santoro Claudia Tolleson
Arkansas (1)			Ray Biondo Brad Baltz Bob Cogburn Michael Cope David Coussens Philip Deer, III Shirley DesLauriers Thomas Eans Jim English Thomas Frazier Fred Henker Reid Henry Steve Hodges Jim Ingram Thomas Jansen Carl Johnson Gail Jones Stanley Kellar David King Dean Kumpuris Marvin Leibovich Stephen Magie Jane McKinnon Valerie McNee Rickey Medlock Tena Murphy Fred Nagel George Norton Carl Raque John Redman Deanna Ruddell Ashley Ross Ted Saer Frank Sipes Kemp Skokos Duane Velez		
Ashley (1)					
Baxter (2)					
Benton (4)					
Boone (2)	Sue Chambers Tom Langston Joe Wharton	Carl Chambers Kerry Pennington			
Bradley (1)					
Carroll (1)					
Chicot (1)					
Clark (1)	Noland Hagood	Mark Jansen			
Cleburne (1)					
Columbia (1)	John Alexander, Jr.	Thomas Pullig			
Conway (1)					
Craighead/ Poindexter (7)	Terence Braden Timothy Dow Dennis Parten Joe Stallings Henry Stroope R. Wendell Ross G. Edward Bryant Scott Ferguson				
Crawford (1)			Trent Pierce		
Crittenden (2)	Robert Hayes John Delamore	Willard Burke			
Cross (1)					
Dallas (1)					
Desha (1)					
Drew (1)					
Faulkner (2)	Randal Bowlin Ben Dodge	John D. Smith Phillip Stone			
Franklin (1)					
Garland (7)					
Grant (1)					
Greene/Clay (1)	Dwight Williams	Darrell Bonner			
Hempstead (1)					
Hot Spring (1)					
Howard/Pike (1)					
Independence (2)	John R. Baker William Waldrip Mufiz Chauhan Simmie Armstrong Jacquelyn Frigon David Jacks George Roberson Jerry Woods	Jeff Angel Richard Van Grouw Roger Green	Randolph (1) Saline (2) Sebastian (12)	Randy Ennen Cole Goodman Michael Gwartney David Hunton Greg Jones Robert Knox Claire Price John Swicegood Timothy Waack John Wells	Allen Beachy Mike Berumen Peter Fleck David McClanahan Steve Nelson Stephen Seffense Michael Standefair Eric Taft
Jackson (1)					
Jefferson (5)	Brad Harbin Robert Quevillon	Sebastian Spades			
Johnson (1)					
Lafayette (1)					
Lawrence (1)					
Lee (1)					
Little River (1)					
Logan (1)	John R. Williams	James Harbison	Sevier (1)	John Hall	Harry Starnes
Lonoke (1)	Leslie Anderson		St. Francis (1)	Charles Sisco	
Medical Student (1)			Tri-County (1)	Jim Sharp	
Miller (3)	John Ford Joseph Robbins Joe Jones	F. E. Joyce Herbert Wren Richard Hester	Union (3)	Anthony Hui	
Mississippi (1)			Van Buren (1)	William McGowan	
Monroe (1)			Washington (8)	Sanford Hutson, III	
Nevada (1)				Michael Morse	
Ouachita (1)	William Dedman L. J. Pat Bell, Sr.	Milton Brunson Marion McDaniel David Fried	White (3)	David Covey	
Phillips (1)			Woodruff (1)		
Polk (1)	Thomas Tinessz		Yell (1)	James Maupin	Gene Ring
Pope (3)	Stanley Bradley Rudolph Massey David Murphy				
Pulaski (39)	William Ackerman D. B. Allen	James Adametz Dana Abraham			

1997 House of Delegates

First Meeting, House of Delegates 5:00 p.m., Thursday, May 1 Anna Redman, M.D., Speaker

1. Call to order
2. Introduction of guests
 - Mrs. Susan Paddock, Field Director, American Medical Association Alliance
 - Mrs. Gwen Pappas, President-elect, Southern Medical Association Auxiliary
 - Mrs. Ruth Mabry, President, Arkansas Medical Society Alliance, Pine Bluff
 - Mrs. Barbara Moody, President-elect, Arkansas Medical Society Alliance, Salem
3. Adoption of minutes of the 120th Annual Session as published in the June 1996 issue of *The Journal of the Arkansas Medical Society*.
4. Memorials
5. Presentations
6. Old Business
7. New Business
 - All reports, resolutions, and other items of business received by the headquarters office twenty days prior to the meeting shall be included in the agenda. Any items of business received after April 11th, must have two-thirds consent of attending delegates before introduction. All items will be referred to reference committees.
8. Announcement of a vacancy in the Third Congressional District of the Arkansas State Medical Board
9. Address by Randolph D. Smoak, Jr., M.D., Secretary/Treasurer, American Medical Association, Orangeburg, South Carolina
10. Recess until Saturday

Final Meeting, House of Delegates 10:30 a.m., Saturday, May 3 Anna Redman, M.D., Speaker

1. Call to order
2. Election of officers. Nominations as submitted by the Nominating Committee:
 - President-elect:** Mike Moody, M.D., Salem
 - Vice President:** Steve Thomason, M.D., Cabot
 - Treasurer:** Lloyd Langston, M.D., Pine Bluff
 - Secretary:** Carlton Chambers, M.D., Harrison
 - Speaker of the House:** Anna Redman, M.D., Pine Bluff
 - Vice Speaker of the House:** Kevin Beavers, M.D., Russellville
 - Delegates to the AMA:** James Weber, M.D., Jacksonville (1/1/98 - 12/31/99)
 - Alternate Delegate to the AMA:** Larry Lawson, M.D., Paragould (1/1/98 - 12/31/99)

Councilors:

- | | |
|--------------|---------------------------------------|
| District 1: | Joe Stallings, M.D., Jonesboro |
| | Joe Jones, M.D., Blytheville |
| District 2: | Lloyd Bess, M.D., Batesville |
| District 3: | Dennis Yelvington, M.D., Stuttgart |
| District 4: | John Lytle, M.D., Pine Bluff |
| District 5: | Richard Pillsbury, M.D., El Dorado |
| District 6: | Michael Young, M.D., Prescott |
| District 7: | Brenda Powell, M.D., Hot Springs |
| District 8: | Joseph Beck, M.D., Little Rock |
| | C. Reid Henry, Jr., M.D., Little Rock |
| | William Jones, M.D., Little Rock |
| | Mayne Parker, M.D., Little Rock |
| | Anthony Johnson, M.D., Little Rock |
| | Samuel Welch, M.D., Little Rock |
| District 9: | Anthony Hui, M.D., Fayetteville |
| | Jan Turley, M.D., Rogers |
| District 10: | Mike Berumen, M.D., Fort Smith |
| | Paul Wills, M.D., Fort Smith |
3. Address by the President of the Arkansas Medical Society, John Crenshaw, M.D., Pine Bluff
 4. Reports of Reference Committees #1 and #2
 5. Report of the Council, Gerald Stoltz, M.D., Chairman (Report covers meetings held during annual session.)
 6. New Business
 - *Announcement of nominees for the Arkansas State Medical Board
 - *Other new business

Vacancy in the Third Congressional District, Arkansas State Medical Board

A vacancy will occur December 31, 1997, in the Third Congressional District position of the Arkansas State Medical Board. The term of office will be for eight years. Members from the counties in the old congressional district are urged to meet immediately following the adjournment of the House of Delegates on Thursday to vote for nominees. Nominations should be reported to the Society personnel immediately following the caucuses (only one nomination is required).

Rhys Williams, M.D., of Harrison is currently serving the term which will expire in December 1997. Dr. Williams is eligible to succeed himself.

The Third Congressional District consists of the following counties: Baxter, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Van Buren, and Washington.

Council Meetings

The Council will meet at the following times:

Thursday, May 1, 2:00 p.m.

Friday, May 2, 7:30 a.m.

Saturday, May 3, 7:30 a.m. (tentative)

Nominating Committee

Carlton Chambers, M.D., Chairman

The members of the 1996/1997 Nominating Committee are Drs. A. E. Andrews, Daniel Davidson, Kevin Hale, Marion McDonald, Robert Nunnally, Merrill Osborne, Paul Wills, Harold Wilson, John Wilson, and Carlton Chambers, Chairman.

The Nominating Committee met on Sunday, November 17, 1996 during the AMS fall meeting and again by conference call on January 14, 1997. We wish to present to the Society the following nominees:

President-elect: Mike Moody, M.D., Salem

Vice President: Steve Thomason, M.D., Cabot

Treasurer: Lloyd Langston, M.D., Pine Bluff

Secretary: Carlton Chambers, M.D., Harrison

Speaker of the House: Anna Redman, M.D., Pine Bluff

Vice Speaker of the House: Kevin Beavers, M.D., Russellville

Delegates to the AMA:

James Weber, M.D., Jacksonville

(1/1/98 - 12/31/99)

Alternate Delegate to the AMA:

Larry Lawson, M.D., Paragould

(1/1/98 - 12/31/99)

Councilors:

District 1: Joe Stallings, M.D., Jonesboro

Joe Jones, M.D., Blytheville

Lloyd Bess, M.D., Batesville

Dennis Yelvington, M.D., Stuttgart

John Lytle, M.D., Pine Bluff

Richard Pillsbury, M.D., El Dorado

Michael Young, M.D., Prescott

Brenda Powell, M.D., Hot Springs

Joseph Beck, M.D., Little Rock

C. Reid Henry, Jr., M.D., Little Rock

William Jones, M.D., Little Rock

Mayne Parker, M.D., Little Rock

Anthony Johnson, M.D., Little Rock

Samuel Welch, M.D., Little Rock

Anthony Hui, M.D., Fayetteville

Jan Turley, M.D., Rogers

Mike Berumen, M.D., Fort Smith

Paul Wills, M.D., Fort Smith

African-Americans in Clinical Research

Culture, Community & Collaboration

Speakers Include:

Lawrence J. Appel, Johns Hopkins University	Elizabeth Fontham, Stanley S. Scott Cancer Center
Wendy Campbell, Campbell and Company	Lynn Lichtermann, University of Tennessee
Wayman Cheatham, Howard University	Sherry Mills, National Cancer Institute
Howard Fishbein, The Galup Organization	Eldra Perry, University of Tennessee
Ed Fisher, Washington University	Jim Raczysky, University of Alabama Medical Center

May 5-6, 1997

C. B. Pennington Jr.
Conference & Education Center
Baton Rouge, Louisiana

Sponsored by:
National Cancer Institute

Presented by:
LSU Medical Center
Stanley S. Scott Cancer Center
Pennington Biomedical Research Center

Registration: \$95, if before April 25

For more information, call (504) 763-2599, e-mail phillibh@mhs.pbrc.edu,
or write Ben Phillips, Pennington Biomedical Research Center,
6400 Perkins Road, Baton Rouge, LA 70808

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for the
Jazz & Heritage Festival
May 1-4!

1997 Reference Committees

Reference Committees

Reference Committees are appointed by the Speaker of the House of Delegates to consider the various reports and resolutions. Reports published in the April issue of *The Journal*, as well as any reports and resolutions presented at the first meeting of the House on May 1st, will be referred by the Speaker to the reference committees. The committees will hold open hearings at 9:30 a.m. on Friday, May 2nd. After the opening hearings, the reference committees will hold executive sessions for the purpose of preparing recommendations and reports for the House of Delegates. Reports of the Reference Committees will be acted upon by the House of Delegates at the Saturday session.

Reference Committee Orientation

There will be a meeting of all reference committee members on Friday, May 2, at 9:00 a.m. The meeting will be to familiarize the reference committees with the rules, procedures, and writing of the reference committee reports.

Reference Committee Agendas

Reference Committee #1 9:30 a.m., Friday, May 2, 1997

David Murphy, M.D.
Reference Committee Chairman

AGENDA

1. Annual Session Committee
Jerry Mann, M.D. Chairman
2. Arkansas Medical Society 1997 Budget
Gerald Stolz, M.D., Chairman
3. CME Accreditation Committee
Steve Strode, M.D., Chairman
4. Report of the Council
Gerald Stolz, M.D., Chairman
5. Executive Vice President Report
Ken LaMastus, CAE, Executive Vice President
6. Physicians' Health Committee
Joe Martindale, M.D., Chairman
7. Young Physician's Leadership Task Force
Anna Redman, Chairman

Reference Committee #2 9:30 a.m., Friday, May 2, 1997

Omar Atiq, M.D.
Reference Committee Chairman

AGENDA

1. Medical Education Foundation for Arkansas
Martin Eisele, M.D., President
2. Medical Services Review Committee
Joe Stallings, M.D., Chairman
3. AMS Medical Student Section
Joel Milligan, President
4. Pulaski County Medical Society
Fred Reddoch, Executive Director
5. Arkansas Department of Health
Sandra Nichols, M.D., Director
6. Arkansas Health Care Access Foundation
Pat Keller, Director
7. Arkansas State Medical Board
Peggy Pryor Cryer, Executive Secretary

Business Reports

Reports for Reference Committee #1

Annual Session Committee

Jerry Mann, M.D., Chairman

"Mastering Medicine's Challenges" was the theme for the 1996 AMS annual meeting. The convention was off to a great start with Lonnie R. Bristow, M.D., President of the AMA, speaking at the opening House of Delegates. Dr. Bristow, an internist from San Pablo, California, has been a member of the AMA Board of Trustees since 1985.

The educational programs began with "Staying Out of Court" a workshop for young physicians focusing on mistakes physicians make that cause loss of practice time due to legal problems. Feature sessions attended by over 200 physicians included "A Patient's Right to Know...Curbing the Abuses of Managed Care," "Personal Political Power," "Infectious Diseases: An Arkansas Focus," and "Managed Care: Confronting and Dealing with the New Realities."

Over 70 companies exhibited their products and services. Several educational grants were received and many activities were sponsored by some of these organizations. The members of the Arkansas Medical Society appreciate the support from these companies which helps make the convention possible.

The inaugural banquet was held on Friday evening and John Crenshaw, M.D., of Pine Bluff, was inducted as the 1996/1997 AMS president. Officers and councilors were elected at the House of Delegates meeting on Saturday. The meeting concluded at 12:30 p.m. and several specialty groups met in the afternoon.

Arkansas Medical Society 1997 Budget

Gerald Stoltz, M.D., Chairman

Income	Amount
Dues	\$730,000.00
Journal Advertising	87,000.00
Booth	37,000.00
Annual Session	37,000.00
AMA Reimbursement	13,000.00
Directory & Miscellaneous	15,500.00
Interest Income	50,000.00
Specialty Desk	1,620.00
Continuing Medical Education	7,200.00
Allocation of G.A. Department	5,000.00
Educational Programs	40,000.00
Legal Guide	25,000.00
TOTAL	\$1,048,320.00

Expenses:

Salaries	\$295,585.00
Travel & Convention	45,000.00
President's Account	5,000.00
Taxes	24,000.00
Retirement	35,946.00
Stationery & Printing	15,000.00
Office Supplies & Expenses	28,000.00
Telephone	11,000.00
Rent	79,672.05
Postage	30,000.00
Insurance & Bonds	47,000.00
Auditing	6,000.00
Council & Executive Committee	4,000.00
Journal & Directory Expense	82,000.00
Dues & Subscriptions	6,000.00
Gifts & Contributions	2,500.00
Alliance	8,700.00
Legal Services (retainer)	27,426.00
Committee / District Meeting	7,700.00
Public Relations	3,000.00
Miscellaneous Expenses	5,000.00
Office Equipment & Furniture	16,000.00
Continuing Medical Education	4,800.00
Richmond Early Retirement	5,820.00
Contract Labor	5,000.00
Winter Meeting	0.00
Resident & Student Section	6,000.00
Annual Session	75,000.00
Educational Programs	20,000.00
Physicians Health Committee	10,000.00
MEFFA -Dues	13,000.00
Legal Guide	5,000.00
TOTAL	\$929,149.05

Governmental Affairs Budget

Income:

Dues	\$245,000.00
Miscellaneous Projects	2,000.00
TOTAL	\$247,000.00

Expenses:

Salaries	\$117,937.00
Retirement	14,013.00
Taxes	8,600.00
Stationery & Printing	9,000.00
Office Sup, Telephone,	6,600.00
Equipment & Furniture	1,500.00
Auto, Travel & Meeting	40,000.00

Legal Retainer	18,300.00
Postage	20,000.00
Insurance & Bonds	9,800.00
Office Allocation To AMS	5,000.00
PPA - Expenses Coalition	2,000.00
Audit	1,500.00
TOTAL	\$254,250.00

CME Accreditation Committee

Steve Strode, M.D., Chairman

The Arkansas Medical Society is the official accrediting body for organizations that provide or sponsor continuing medical education for physicians within the state of Arkansas. The Arkansas Medical Society was awarded continued recognition for a period of four years by the Accreditation Council for Continuing Medical Education (ACCME) on September 7, 1995.

The accreditation activities are carried out by the CME Accreditation Committee which currently consists of Drs. Sanford Hutson, Charles Mabry, Carlton Chambers, Morton Wilson, and myself. Kay Waldo and David Wroten of the AMS provide the administrative support necessary to fulfill our mission.

During the past year the committee reviewed two organizations, both hospitals, for reaccreditation. The results were probationary status for one year for one hospital and four years full accreditation for the other hospital. One hospital voluntarily withdrew from the program. A total of eight hospitals are accredited.

The accreditation organizations are required to submit an annual report every January. These are reviewed by the AMS staff and summaries are presented to the committee for their approval.

The committee is in need of experienced surveyors or physicians interested in learning to conduct surveys. Usually no more than two or three surveys are conducted per year and each one takes approximately one-half day. The surveyors are paid \$100.00 per survey plus mileage. Committee meetings are held on an as needed basis, usually quarterly. Anyone interested in the continuing medical education accreditation program should contact David Wroten or Kay Waldo.

My sincerest thanks to the committee members and staff for the hard work they all contribute to this process.

Report of the Council

Gerald Stoltz, M.D., Chairman

AMS Council:

The Council met on Sunday, March 31, 1996, at the Pleasant Valley Country Club in Little Rock and the following business was received and transacted:

1. The Council approved the minutes from the October 29, 1995 Council meeting.

2. The Council approved the minutes from the October 25, 1995 Executive Committee meeting.
3. The Council approved the minutes from the December 13, 1995 Executive Committee meeting.
4. The Council approved the minutes from the January 24, 1996 Executive Committee meeting.
5. The Council approved the minutes from the February 27, 1996 Executive Committee meeting.
6. The Arkansas Medical Society membership and budget reports were accepted for information.
7. Upon motion, the Council approved changes to the Arkansas Medical Society Alliance bylaws.
8. Upon motion, the Council granted approval for Dr. Brenda Powell of Hot Springs to fill the unexpired term of Dr. Thomas Hollis as a councilor from the seventh district.
9. Upon motion, the Council granted approval for Dr. William McGowan to fill the unexpired term of Dr. Janet Titus as a councilor from the ninth district.
10. Dr. William Golden discussed his candidacy for the AMA Board of Trustees. Upon motion, the Council approved the endorsement of Dr. Golden.
11. Dr. William Jones gave an update on his candidacy for a position on the AMA's Council on Scientific Affairs. The election will be held in June at the AMA annual meeting.
12. Dr. John Burge gave a report on the AMA interim meeting held in December in Washington, D.C. Dr. Burge discussed the AMA's possible reorganization to include delegates representing specialty organizations. The Council instructed that a copy of the Report of the Federation be mailed to all Council members for their review prior to the next Council meeting.
13. Lynn Zeno gave an update on the AMA Leadership Conference in which he and Drs. Mike Moody, Carlton Chambers, William Golden, William Jones, Robert McCrary, and Parthasarathy Vasudevan attended.
14. David Wroten gave an update on the Arkansas Workers' Compensation Commission activities. Public hearings were held recently to discuss mandated MCO's and the Commission has reversed their decision on this issue.

15. Mike Mitchell and Ken LaMastus made a proposal to publish a Doctors' Legal Guide containing medically related laws in Arkansas. The estimated cost for this project is \$27,000.00. Upon motion, the Council approved this project.
16. The Council discussed a request from the Arkansas Sleep Disorders Society to have a representative to the Medical Services Review Committee (MSRC). The Council felt this was not necessary at this time and a representative could be called upon if ever needed. A letter will be written to Dr. Joe Stallings, Chairman of the Medical Services Review Committee, stating the Council's decision in this matter and Dr. Stallings, as Chairman of the MSRC, can respond to the group.
17. Dr. Glen Baker discussed the Arkansas State Medical Board's requirement for physicians to be licensed in Arkansas to perform tests for Arkansas residents. There was no action necessary for the Council as the Arkansas State Medical Board will address this issue.
18. Janell Mason gave an update on the AMS Management Company and discussed the proposals to be presented immediately following the Council meeting. Janell estimated the AMS Management Company has approximately three months capital remaining.
19. Dr. John Crenshaw informed everyone of the President's Club meeting to be held on Wednesday, May 1, in conjunction with the Arkansas Medical Society's annual meeting.
20. Dr. Glen Baker gave an update on the Arkansas Medical Foundation. The bylaws have been approved and officers have been selected.

The Council adjourned to reconvene in executive session. Minutes of executive sessions are available for review by any member at the AMS office.

The Council met May 2-3, 1996, at the Excelsior Hotel in Little Rock and the following business was received and transacted:

1. Dr. Larry Lawson explained the recommendation from the AMS Management Company Board regarding the sale of the assets of the AMS Management Company. Consultant Bill Loweth stated this transaction should allow the Arkansas Medical Society to recover the initial investment. THG would be able to offer more services and support

the current AMCO's. The Council members discussed the options and consequences regarding this transaction.

Upon motion the Council approved a resolution authorizing the Board of Directors of the AMS Management Company to 1) sign a letter of intent with THG Management Services for the purchase of the AMS Management Company and complete the sale according to those terms; 2) authorize the Board to take the necessary steps to dissolve the corporation; and 3) encourage the AMCO's to execute new management agreements with THG Management Services.

2. Upon motion the Council approved the minutes of the March 31, 1996 Council meeting.
3. The following reports were accepted for information: AMS Membership Report; AMS Budget Report; AMS Audit for 1995; and MEFFA Audit for 1995.
4. Dr. Lonnie Bristow, President of the American Medical Association, greeted the Council members and briefly discussed legislative issues in Washington including anti-trust, Medical Savings Accounts, and professional liability reform. Dr. Bristow also discussed the report of the Federation.
5. Dr. William Jones discussed the AMA's recent announcement concerning the divestment of all tobacco related stocks, bonds, and mutual funds. Upon motion, the Council voted for the Budget Committee to undertake a comprehensive study of investment portfolios of the Arkansas Medical Society, the AMS Pension Plan, and MEFFA to determine every instance where our monies are invested in tobacco companies, their subsidiaries, and/or mutual funds holding tobacco stocks and bonds; and that a report be made to the Council at our next meeting at which time the Council will consider divestment of all tobacco related stocks, bonds, and mutual funds.
6. Dr. Glen Baker gave an update on the new foundation for the Physicians' Health Committee, the Arkansas Medical Foundation. The Foundation will oversee the Physicians' Health Committee and funding that activity. Dr. Martindale will serve as director. Board members are Dr. Glen Baker, President; Dr. Larry Lawson, Vice President; Karen Ballard, Secretary/Treasurer; Dr. Joanna Seibert; and one doctor of osteopathy yet to be named.

7. Dr. William Jones discussed the new Medicare HMO techniques for credentialing physicians by requesting to review random office charts. Upon motion the Council voted to refer this issue to the Arkansas State Medical Board for investigation to determine if this represents a breach of medical ethics and the Medical Practices Act.
8. The Council elected Dr. Anna Redman, Dr. Tim Langford, and Dr. Jerrel Fontenot to serve as an ad hoc committee to make recommendations to reorganize the Young Physicians Committee.
9. The Council made the following committee appointments:

Budget Committee: Gerald Stoltz, Russellville and Robert McCrary, Hot Springs

Journal Editorial Board: reappointed Ben Saltzman, Mountain Home, family practice and reappointed Lee Abel, Little Rock, internal medicine

Medical Education Foundation for Arkansas: re-appointed Martin Eisele, Hot Springs

Arkansas Medical Society Pension Plan Board of Trustees: Wayne Elliott, El Dorado

Committee on Position Papers: reappointed Roger Cagle, Paragould, Chairman; reappointed Paul Wills, Fort Smith; reappointed Paul Wallick, Monticello; reappointed Martin Fiser, Little Rock; and reappointed Peter Marvin, North Little Rock.

Medical Services Review Committee:
Family Practice: Kerry Pennington, Warren
General Surgery: Samuel Landrum, Fort Smith
Obstetrics/Gynecology: Karen Kozlowski, Little Rock
Internal Medicine & Pediatric Representatives: positions open pending reports from their organizations.
Pathology: Gerald Stoltz, Russellville
Orthopaedic Surgery: David Newbern, Little Rock

MSRC Subcommittee of Subspecialties:
Emergency Medicine: James Tutton, Benton
Nephrology: Ronald Hughes, Little Rock
Pediatric Allergy: Joseph Matthews, Little Rock

Physicians' Advisory Committee to Medicare:
Emergency Medicine: James Tutton, Benton
Family Practice: Kerry Pennington, Warren
General Surgery: Samuel Landrum, Fort Smith
Nephrology: Ronald Hughes, Little Rock
Obstetrics/Gynecology: Janet Cathy, Little Rock
Orthopaedic Surgery: D. Gordon Newbern, Little Rock

Pathology: Gerald Stoltz, Russellville
Pediatric Representative: position open pending report from their organization

Physicians' Health Committee: Stacey Johnson, Mountain Home

10. Upon motion the Council approved a change to the bylaws for the Physicians Advisory Committee for a term of three years and a member cannot serve more than one term. This will coincide with the MSRC bylaws.
11. Dr. John Burge discussed the Report of the AMA Federation to be voted on at the AMA House of Delegates meeting in June and encouraged everyone to give the AMS delegates their comments before the meeting.
12. Upon motion the Council approved requests for dues exemption for life, emeritus, and affiliate memberships.

The Council met at noon on Sunday, August 25, 1996, at the Pleasant Valley Country Club in Little Rock and the following business was received and transacted:

1. Upon motion the Council approved the minutes of the May 2-3, 1996 Council meetings.
2. Upon motion the Council approved the minutes of the June 27, 1996 Executive Committee conference call.
3. Upon motion the Council approved the minutes of the July 24, 1996 Executive Committee meeting.
4. Upon motion the Council gave its approval for Dr. James M. Kolb, Jr. to fill the unexpired term of Dr. James Armstrong on the Executive Committee. Dr. Armstrong was the Immediate Past President of the Arkansas Medical Society.
5. David Ivers gave an update on the Patient Protection Act Lawsuit. A ruling from the judge is expected in a couple of months. Mr. Ivers did not believe there would be a trial.
6. David Wrotten gave a presentation on behalf of Dr. Anna Redman, Chairperson of the Young Physicians Committee. Upon motion the Council voted to accept Dr. Redman's proposals as submitted which include a committee structure change and renaming the committee the Young Physicians Leadership Task Force.

7. David Wroten discussed the Arkansas State Medical Board's proposed regulation regarding CME requirements for licensure. Upon motion the Council voted to ask the board to consider accepting specialty board certifications as meeting the requirements and to consider an exemption for retired physicians.
8. Dr. John Burge gave a report on the AMA meeting held in Chicago in June. He explained the reorganization of the AMA House of Delegates will include more specialty representation. This should not affect the Arkansas Medical Society. Upon motion, the Council referred a proposal to the Budget Committee that would allow alternate delegates to attend two AMA meetings a year rather than one.
9. Upon motion the Council gave its approval for Dr. Samuel Welch of Little Rock to fill the unexpired term of Dr. Charles Logan as an Eighth District Councilor. Dr. Logan is President-elect of the Arkansas Medical Society.
10. Upon motion the Council gave its approval for Dr. Paul Wills of Fort Smith to fill Dr. Gerald Stolz' unexpired term on the AMS Nominating Committee. Dr. Stolz is the chairman of the Council.
11. Chairman Stolz discussed the scheduling of Council meetings. Dr. Stolz will appoint an ad hoc committee to consider alternatives to meeting on Sunday at noon.
12. Dr. Larry Lawson gave an update on the sale of the AMS Management Company. The sale of the company has been completed. The Arkansas Medical Society has received \$100,000 of the \$300,000 originally invested and expects to receive additional funds at a later date.
13. The Council gave its approval for Dr. Charles Ball of Fayetteville to serve on the Medical Services Review Committee to represent Pediatrics.
14. Lynn Zeno reported on the Arkansas Health Care Coalition established to ensure health care cost containment and oppose anything they consider anti-managed care. Several large employer groups and insurance companies have joined this coalition.
15. Chairman Stolz discussed plans for the Arkansas Medical Society Fall Meeting scheduled for November 16-17, 1996 at the Lake Hamilton Resort in Hot Springs and encouraged everyone to attend.
16. Ken LaMastus discussed the information received from Boatmen's Trust Company regarding investment of all tobacco related stocks, bonds, and mutual funds. The Council approved the following motions submitted by Dr. William Jones:
- The Arkansas Medical Society Council send a letter of commendation to the President of the United States Bill Clinton and the Commissioner of the Food and Drug Administration, David Kessler, for their leadership roles in the fight to reduce teenage use of tobacco products, and the recognition of nicotine as an addictive drug contained in tobacco that is responsible for the premature death of over 400,000 United States citizens each year and that copies of these letters be forwarded to the Board of Trustees of the American Medical Association.
- The Arkansas Medical Society Council instruct the Budget Committee to carry out the divestment of tobacco related stocks, bonds, and mutual funds contained in the portfolio of the Arkansas Medical Society, the AMS Pension Plan, and MEFFA with due consideration to the suggestions outlined in the August 1, 1996 letter from Boatmen's Vice President Pat D. Moon.
- Any future investments of the Arkansas Medical Society controlled funds exclude the purchase of any tobacco related stocks, bonds, or mutual funds. The tobacco investment action taken be reported to the American Medical Association Board of Trustees and the American Medical News. These actions shall be reported to the Arkansas Medical Society membership in the next newsletter and in a future publication of *The Journal of the Arkansas Medical Society* and the report shall indicate the Arkansas Medical Society Council's encouragement of the membership to take similar action in regard to their individual investment portfolios.
17. Ken LaMastus reported on a coalition consisting of UAMS, the American Cancer Society, the Arkansas Department of Health, the American Lung Association, the American Heart Association, and others, that will apply for a Robert Woods Johnson Foundation grant to help combat teenage smoking. The grant would be for \$800,000 over a four-year period. The Arkansas Medical Society has been asked to be the lead organization.
- Joel Milligan, President of the AMS Medical Student Section, offered support from the Medical Student Section to speak to teenagers and educate them on the dangers of tobacco.
18. Dr. Joe Stallings discussed the ever increasing use

of appetite suppressant drugs prescribed by physicians and whether the Arkansas Medical Society should have a position on this issue. Upon motion the Council voted to refer this to the Position Papers Committee and for the Position Papers Committee to report on this at the spring meeting.

The Council met November 16-17, 1996 at the Lake Hamilton Resort in Hot Springs, Arkansas and the following business was received and transacted on November 16, 1996:

1. Upon motion the Council approved the August 25, 1996 Council minutes.
2. Letters of commendation to the President of the United States and the Commissioner of the Food and Drug Administration for their leadership roles in the fight to reduce teenage use of tobacco products, and the recognition of nicotine as an addictive drug were presented for information. A letter informing the AMA of the Arkansas Medical Society's decision to divest any of its holdings in tobacco stocks was also presented for information.
3. David Wroten discussed the concerns of the Arkansas Department of Human Services' regarding the renewal of the hospital obstetrics waiver.
4. Upon motion Dr. Anna Redman of Pine Bluff was elected as an AMA alternate delegate replacing Dr. James Kolb. Dr. Kolb received a standing ovation for his dedication and hard work.
5. Upon motion Dr. Anthony Hui of Fayetteville was elected to fill the unexpired term of Dr. David Davis who recently resigned as a Ninth District Councilor.
6. Upon motion the Council voted to fill two vacancies in the Medical Services Review Committee. Dr. Terry Green of Dardanelle will represent orthopaedic surgery and Dr. Ron Hughes of Little Rock will represent internal medicine. Dr. Green was also elected to serve on the Arkansas Medicare Carrier Advisory Committee.
7. Dr. Robert McCrary reported on the results of a recent survey of officers and councilors to determine the best day and time for Council meetings. Dr. McCrary reported the vast majority of responses indicated a desire to continue to hold meetings on Sundays at noon. Upon motion the Council voted to accept the report and continue with Sunday meetings.
8. Dr. Carlton Chambers reported on the Southeast Continuing Medical Education Symposium hosted

by the Arkansas Medical Society in October in Little Rock. The meeting was attended by CME professionals, hospital staff, and physicians from Arkansas, Louisiana, Alabama, and Mississippi. Dr. Chambers reported it was an excellent program with national speakers and was very informative.

9. Dr. John Crenshaw reported the first annual meeting of the nursing facility medical directors and administrators sponsored by the Arkansas Health Care Association and the Arkansas Medical Society had recently been held in Little Rock. The meeting was well attended and Dr. Crenshaw felt there is definitely a need to continue with annual meetings.

The Council adjourned to reconvene into Executive Session on Sunday, November 17, 1997. Minutes of executive sessions are available for review by any AMS member at the Society office.

AMS Executive Committee:

The Executive Committee met on Wednesday, January 24, 1996, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

1. The Executive Committee received an update on the Patient Protection Act lawsuit. The attorneys have until March 25 to complete discovery. The trial date is set for May 20 in Judge Moody's court. Mike Mitchell expects a decision sometime in June.
2. The Executive Committee received an update from David Wroten on the Workers' Compensation Commission requirements for continuing medical education. He also discussed concerns by insurance companies regarding the mandatory managed care organization requirements. David reported that no where in the law does it mention this being mandatory.
3. The Executive Committee discussed the AMA Leadership Conference to be held in March. The Executive Committee gave its approval for three members and one staff person to attend the conference and for the Society to pay Dr. William Jones' registration fee with the remainder to come from his campaign funds.
4. The Executive Committee reviewed a request for membership in the Arkansas Tort Reform Association (ATRA). The Society paid \$5,000.00 last year to join ATRA when legislation on tort reform was expected to be introduced in the legislature. The Executive Committee asked Ken LaMastus to review this matter and consider a lower contribution.

5. The Executive Committee discussed endorsing Autoflex Leasing Company. This would be a five-year commitment and would be managed through AMS Benefits. The agreement includes advertising in the journal and membership directory, support at the annual convention, and \$100.00 per automobile leased or purchased by Arkansas physicians. The Texas, Oklahoma, and the Pennsylvania Medical Associations also endorse Autoflex Leasing. Currently some AMS members purchase their vehicles through Autoflex and are satisfied with their services. The AMS recently purchased a company automobile through Autoflex and the savings were approximately \$800.00 over other companies. The Executive Committee gave its approval for endorsement of Autoflex Leasing Company.
 6. The Executive Committee discussed preparing a legal guide containing all the medically related laws in Arkansas. Mr. Mitchell indicated he has a law clerk who could spend the summer working on this project instead of one of the law partners which would be a considerable savings for the Society. The Executive Committee recommended this be referred to the Council at its next meeting with estimates on the cost of preparing the guide and estimated sale price.
 7. The Executive Committee reviewed information concerning leasing a portion of the AMS Management Company suite. This cost of preparing part of the suite to be leased could be as high as \$10,000 to \$11,000. There are potential tenants who have expressed interest in the space. The Executive Committee recommended that we proceed with leasing the unused portion of the AMS Management Company suite.
 8. The Executive Committee approved a list of physicians requesting direct membership into the Arkansas Medical Society.
 9. Dr. John Crenshaw recommended that we contact Dr. James Adamson at Arkansas Blue Cross Blue Shield and ask him to provide a list of MSRC and Medicare Advisory Committee members who have missed two consecutive meetings or one-half of the meetings per calendar year. This would help us and the specialty groups in appointing physicians to serve on these two committees.
1. The Executive Committee reviewed proposed changes in the Arkansas Medical Society Alliance Bylaws. These bylaws will be included in the agenda for the next Council meeting.
 2. The Executive Committee discussed the concerns of physicians in Northwest Arkansas about AMCO contracting with the closed panel PHO at Washington Regional Medical Center in Fayetteville. It was decided that the members of the AMS Executive Committee would meet with representatives of the Northwest Arkansas IPA to discuss this matter.

The Executive Committee met at 3:00 p.m., Thursday, June 27, 1996, by conference call and the following business was received and transacted:

1. The Executive Committee voted unanimously to send a letter to Lt. Governor Mike Huckabee endorsing Dr. Sandra Nichols, as Director of the Arkansas Department of Health.
2. David Wroten discussed closing the AMS Benefits trust. It has been over one year since the insurance program was turned over to American Investors Life Insurance Company. The Executive Committee voted to close the trust. (The Executive Committee and three AMS staff members are the board of directors of AMS Benefits, Inc.)
3. Dr. Gerald Stoltz discussed the date for the next Council meeting, August 25. A Council retreat was also discussed. With so many new councilors a retreat would allow time for explaining some additional functions of the Arkansas Medical Society and give the new councilors a chance to ask questions. There was discussion on having this retreat in conjunction with the fall meeting, November 16-17.
4. Ken LaMastus asked for permission to attend the American Society of Association Executives (ASAE) national meeting. He indicated we normally send two staff members to the American Association of Medical Society Executives (AAMSE) annual meeting. Instead of attending the AAMSE meeting he would like to attend the ASAE meeting in order to obtain continuing education credit for his Certified Association Executive recertification. This request was approved.
5. Two letters were received by the Executive Committee pertaining to problems at the Jefferson Regional Medical Center's emergency department with inmates from the Arkansas Department of Corrections being sent there for emergency care

The Executive Committee of the Arkansas Medical Society met briefly on Tuesday evening, February 27, 1996, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

and to Little Rock for routine care. This issue was referred to the Executive Committee for information only.

6. The Executive Committee reviewed a letter from Dr. Joe Beck, Chairman of the AMS Committee on AIDS. The Executive Committee accepted Dr. Beck's recommendation to keep the Committee on AIDS intact so it would be available if there was a positive HIV in a physician. The committee is inactive at this time.
7. Dr. John Crenshaw discussed other committees appointed by the AMS President. Dr. Crenshaw indicated he would contact Dr. Jerry Mann to see if he would continue to serve as Chairman of the Annual Session Committee. Dr. Crenshaw recommended that the Task Force on Smoking and Tobacco Products and the Committee on Health Care Reform be disbanded. The Committee on Health Care Reform is the committee that looked into establishing a managed care organization. The Ad hoc Committee on Managed Care, chaired by Dr. Glen Baker, will be left intact.
8. The Executive Committee discussed a recommendation by the Arkansas Tobacco Free Coalition (American Lung Association, American Heart Association, American Cancer Society, etc.) to be the lead sponsor in applying for a grant from the Robert Woods Johnson Foundation. The Executive Committee decided that the AMS staff should look into this further and report their findings to the Executive Committee.

The Executive Committee on Wednesday, July 24, 1996, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

1. Ken LaMastus discussed the possibility of the Arkansas Medical Society being the lead organization of a coalition established to obtain a grant from the Robert Woods Johnson Foundation to prevent tobacco use among teenagers. The Arkansas Medical Society would be committed to working with physicians in this effort. One of the lead organization's responsibility is keeping up with the grant money. Other members of the coalition are the American Heart Association, the American Lung Association, the American Cancer Society, the Arkansas Department of Health, etc. The Executive Committee suggested that more information be obtained and reported to the Council at its next meeting.

2. Pulaski County Medical Society has nominated Dr. Samuel Welch of Little Rock as an Eighth District Councilor to replace Dr. Charles Logan who was elected President-elect of the Arkansas Medical Society.
3. A list of physicians requesting emeritus and direct membership was approved.
4. The Executive Committee requested a letter be sent to Mrs. Armstrong from Dr. Crenshaw expressing the Arkansas Medical Society's sorrow at the loss of Dr. James Armstrong.
5. Ken LaMastus discussed efforts between the Arkansas Medical Society and the Arkansas Health Care Association (Nursing Home Association) to develop a seminar for medical directors and nursing home administrators. Dr. Crenshaw who is a medical director addressed this issue. Dr. Crenshaw will head a committee of medical doctors who will work with nursing home administrators to establish topics for the seminar.

Executive Vice President Report

Ken LaMastus, CAE

As we move into the second quarter of 1997, managed care in its various forms is rapidly becoming more of a factor in the way health care is financed in Arkansas, as well as the way it is being delivered. At the beginning of 1997, there were nine HMOs registered with the Arkansas Department of Health with 170,000 people enrolled. According to *Arkansas Business*, there were thirteen PPOs and numerous PHOs. Approximately 675,000 people are enrolled in PPOs, a significant portion of the insured population of the state. The majority of the hospitals have some affiliation with other hospitals.

It is reported that few, if any, of the HMOs are much above the break-even point in terms of profit. Three Arkansas HMOs are planning to enroll Medicare patients in their programs. As competition for the Medicare patients increase, you can assume the benefits of the HMOs to the Medicare population will increase. Currently, Medicare HMOs are reimbursed by Medicare at 95% of the average health care cost for each enrollee. The counties with the highest Medicare costs are the ones with larger cities and surrounding areas. HMOs are attempting to enroll this population.

There was a recent article in the *Arkansas Democrat Gazette* stating that Medicare is considering increasing to some minimum level the compensation made to HMOs in some of the lower health care cost rural areas. The amount of money involved was not enough to attract the HMOs to enroll people in these rural counties. This makes you wonder about the federal

government's concern about the cost of health care.

The 1995 Arkansas General Assembly passed the "Any Willing Provider" law. Prudential Insurance Company and Arkansas Blue Cross and Blue Shield are attempting to have this overthrown. Federal Judge Moody heard the Prudential case and ruled in their favor. Attorneys for the Arkansas Medical Society felt this was not a reasonable ruling for a number of reasons, and the case has been appealed to the Eighth Circuit Court. The "Any Willing Provider" legislation was passed by an overwhelming majority in the legislature. Elected officials heard from their constituents that they preferred to be able to select doctors of their choice.

As of the writing of this report, the 1997 Arkansas General Assembly is still in session. There is a large number of bills of interest to the physician community. Still under consideration, but not yet heard before a committee, is the "Patient Protection Act II" which has significant benefits for the public, as well as, the medical community. Some of the features of this bill include doing away with the gag rule, and drive by deliveries and mastectomies. It is apparent that some portions of this legislation will be passed. Early attempts to do away with the "Soda Pop" tax used for Medicaid have been dropped.

The House of Representatives has removed the requirements for wearing a motorcycle helmet for those over 21 years of age. At this time, the governor has not signed the bill. Some of the following comical notes concerning the motorcycle helmet law have been heard from the legislators. One legislator said he did not know why people would be concerned about allowing those over 21 years of age to ride a motorcycle without a helmet. He was heard saying this would improve the gene pool. Another legislator was heard saying this would also improve the number of organs available for transplants.

Changes in the Medicaid program are being discussed in part due to efforts of the governor to cut state spending. We have been fortunate for the last two to three years to have one of the best Medicaid programs in the nation. This is partially due to the lawsuit won by the Society. Some efforts have been made to put the program in an HMO. However, no HMO has stepped forward that can match the state in its low cost of administration of the program.

The Arkansas Medical Society anticipates having a web site available for those interested in the Internet. We are working with one of the premiere providers of these services in Arkansas to develop a web site. This would be beneficial to Arkansas physicians and allow our members to receive more information.

The Society continues to offer educational workshops and seminars for physicians, clinic managers, and office staff. The workshops were very successful

in 1996. The first AMS sponsored workshop for 1997, "Audit Proof Your Practice" is filled to capacity. Programs for 1997 include "Managed Care Update" and "Coding Analysis to Maximize Reimbursement."

The Arkansas Medical Society's membership in 1997 is ahead of 1996. The Medical Society is financially sound and the AMS Building is managing its cash flow to the point that it is not a drain on the Medical Society's resources.

I am proud of the Arkansas Medical Society staff in the way they have performed over the last year and am pleased with our members who have taken time from their busy lives to assume responsible positions within the Medical Society and help guide the future of medicine in Arkansas.

It has often been said that the Medical Society will never have resources to make it capable of being all things to all physicians. However, the Society is the one organization that represents all physicians regardless of their field of practice.

As there are rapid changes going on in the delivery of health care services in the state. One thing is apparent for physicians: they should be a part of the Arkansas Medical Society and work together. The Arkansas Medical Society needs its membership, the membership needs the Arkansas Medical Society and, most of all, physicians of this state need each other to work together to move through these turbulent years of change.

Physicians' Health Committee

Joe Martindale, M.D., Chairman

The Physicians Health Committee was established several years ago by the Arkansas Medical Society to intervene and assist physicians with substance abuse problems. During 1996, over 90 impaired physicians received assistance through the Physicians Health Committee program. The program is now being funded through the Arkansas Medical Foundation. Funding for the foundation comes through the Arkansas State Medical Board from a \$20.00 increase in licensure fees. A full-time office has been established. The address is 23157 I-30, Suite 201, Bryant, Arkansas 72022; telephone 847-8088; fax 847-7140. Joe Martindale, M.D., serves as the medical director and Vicki Walters, RRA, is the full-time assistant.

Young Physician's Leadership Task Force

Anna T. Redman, M.D., Chairman

In an effort to more effectively address the needs and concerns of the young physicians of Arkansas, the council voted at its August meeting to restructure the Young Physician's Committee into a Young Physician Leadership Task Force. This smaller group is charged with developing and implementing a plan to

encourage stronger participation among other young physicians in the Society and to disseminate information to these young physicians which might be particularly useful or relevant to their practices.

The task force first met in November, in conjunction with the fall House of Delegates meeting. The group made plans to target specific areas of the state where we each have acquaintances and to personally contact these people and encourage their attendance at the annual meeting. The group hopes to educate our fellow young physicians on the need for participation and also to educate them on the process involved in making changes in the Society and its policies. Another group we plan to target are third year residents, to help them make a smooth transition into practice, and also realize the importance of involvement in the Society.

We will be sponsoring a seminar in conjunction with the annual session, entitled "Getting Started in Medical Practice." The group will meet again during the annual session and all interested young physician are invited.

Family physician faculty - Medical Director for university-based occupational medicine/preventive medicine clinical program. Duties: patient care, administration and teaching. Medical Director for medical school's Student and Employee Health Service; Executive Assessment Program, and primary care Occupational Health Care Clinic. Opportunity to teach and faculty appointment. Must be family practice residency trained with interest in occupational medicine/preventive care. Send CV and statement of interest to: Geoffrey Goldsmith, MD, MPH, Department of Family and Community Medicine, 4301 West Markham, Slot 530, Little Rock, Arkansas 72205-7199.

AFMC Schedules Meeting

The Arkansas Foundation for Medical Care (AFMC) has scheduled its annual membership meeting for 2:30 p.m. in the Arlington Hotel, Hot Springs, on Saturday, May 3, 1997. Members will elect 7 physician directors, one representative each from the hospital industry and the business community to represent them on AFMC's Board of Directors. Additional information will be forwarded to members this month or you may call Patricia Williams at 1-800-272-5528.

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Business Reports

Reports for Reference Committee #2

Medical Education Foundation for Arkansas

Martin Eisele, M.D., President

The Medical Education Foundation for Arkansas was organized by the Arkansas Medical Society in 1959. It is governed by a board of directors appointed by the Council of the Arkansas Medical Society. I am privileged to serve as president. Other members of the board are Drs. William Bishop, James Kyser, and Gerald Stoltz. Serving as ex-officio with voting power are the Arkansas Medical Society president, president-elect, immediate past president, and the Dean of the University of Arkansas College of Medicine.

The Foundation receives funds contributed by the Arkansas Medical Society which amounts to \$5.00 for each full dues paying member per year. By conservative investment and expenditures, the Foundation has grown to a net worth in excess of \$400,000. The Foundation has an independent audit each year and a copy of the audit is provided to the Council. Funds are used each year to promote the art and science of medicine and the betterment of the health of the public by providing financial support to recognize schools or institutions who provide primary and advanced medical education. The board has established a policy of accumulating funds over a period of time so in the future the foundation will have adequate funds to undertake major projects.

During 1996 the Medical Education Foundation for Arkansas made the following contributions to the University of Arkansas College of Medicine:

- * \$5,000.00 to the Ben Saltzman Endowed Chair in Rural Family Medicine
- * \$8,000.00 to the UAMS Distinguished Lecture Series (10 lectures at \$800 each)
- * purchased three computer work stations including software and networking materials for the UAMS Department of Pediatrics
- * purchased a 7-bay CD ROM tower for the UAMS Department of Anatomy

Medical Services Review Committee

Joe Stallings, M.D., Chairman

The Medical Services Review Committee met on April 24, 1996 and July 24, 1996. The next meeting of the Medical Services Review Committee is scheduled for April 23, 1997. The Medicare's development of a clinical advisory committee has reduced the case load of the Medical Services Review Committee. The meetings

have been less frequent the last few years.

The efforts exerted by the members of the Medical Services Review Committee are appreciated by the Arkansas Medical Society Council and Arkansas Blue Cross Blue Shield.

AMS Medical Student Section

Joel C. Milligan, President

It is my distinct pleasure to update you with respect to the activities of the UAMS Medical Student Section of the Arkansas Medical Society and the American Medical Association. I believe that 1996 was an excellent year for our section for many different reasons. In the area of state membership, we experienced a 13% increase in the total number of student members in the AMS (348 FYE Dec. 1995 compared to 393 FYE Dec. 1996). In the area of national membership, we experienced a 43% increase in the number of new members in the AMA (80 FYE Dec. 1995 compared to 114 FYE Dec. 1996). This dramatic increase in our membership has placed us in a good position with respect to ability to serve others and ability to communicate the virtues of organized medicine. As a reward for our recruitment efforts, the AMA sent our UAMS AMA-MSS Chapter a check for over \$2,300 to be used in chapter development. As president of our chapter, I feel it is my duty to start a savings account for the UAMS-MSS Chapter with this money. This money will be used by the chapter to attend sectional meetings, to send more members to the national meetings, to increase recruitment efforts, and to support local charities.

In the area of local meetings, we were privileged to have Mr. Lynn Zeno speak to us this past fall about the medical legislation that is now before Arkansas Legislature. We were also pleased to have the Director of the Arkansas Department of Health, Sandra Nichols, M.D., speak to us about the clinical symptoms and signs of domestic abuse. Both of these speakers were very enthusiastic about their topics and did a wonderful job of educating us about these timely topics. We greatly appreciate the AMS for appropriating funds for the students' lunches at our bimonthly meetings. We could not have these meetings without your support!

In the area of national meetings, Rick White, vice-president of the UAMS AMA/AMS-MSS, and I were privileged to be funded by the AMS to represent Arkansas at the AMA-MSS national meetings in Chicago, IL (June 1996) and in Atlanta, GA (December 1996). Rick and I learned a tremendous amount of information

about the inner workings of the AMA and how it is able to serve medical students from their first day at medical school to the time where they hear their name followed by "MD." Rick and I have taken many of the ideas presented at these meetings and used them here at UAMS to better serve our members.

In the area of projects, Rick White is in the process of developing a fund-raiser that will use the money collected to benefit a worthy charity in our community. Vanessa McKinney, Secretary-Treasurer of UAMS AMA/AMS-MSS, is in the process of acquiring a project that we as medical students can take to area elementary schools in order to teach these future doctors how understanding and using science can help them stay healthy. I recently completed the process of collecting medical journals and textbooks for our "Journal Abroad" project. The purpose of this project is to gather and send them to a clearinghouse that will ship them across the world to medical schools and hospitals in developing countries that are in dire need of current medical information.

I cannot wait to see what next year brings for our medical student section of the AMA/AMS. If you would like more information about our organization or would like to speak to a group of eager medical students about a timely topic, please e-mail me at jcmilligan@life.uams.edu or call (501) 851-8552. Thank you for your continued support. Have a great year!

Pulaski County Medical Society

Bruce E. Schratz, M.D., President

The Pulaski County Medical Society thrived in 1996 under the distinguished leadership of President Bruce E. Schratz, M.D. The following activities helped make the year a memorable one:

*continued membership growth (955) resulting in an additional Councilor position

*presentation of four scholarships to UAMS sophomore medical students

*membership meeting with Mr. Rex Nelson, Gov. Huckabee's Director of Policy and Communications

*sponsorship of a seminar on managed care issues

*management of the Pulaski County Medical Exchange which processed over 500,000 calls for its 600 subscribers and their patients

*joint meeting with the Pulaski County Bar Association attended by 230 members, spouses and guests

The Society anticipates another successful year in 1997 under our new President, Edward H. Saer, M.D.

Arkansas Department of Health

Sandra B. Nichols, M.D., Director

It is my privilege to present to the Arkansas Medical Society a summary of the major accomplishments and activities of the Arkansas Department of Health in 1996. This has been a very important year for the

Arkansas Department of Health. We kicked off an exciting new project - ASPIRE - Arkansas Strategic Planning Initiative for Results and Excellence. This initiative will help ensure that the Department is properly focused for the future.

We recognize that the health care environment is changing rapidly and that we cannot do things just because that is the way we have always done them. As the public health needs of our communities and state are evolving, strategic planning helps identify public health priorities and how to best use limited resources.

In July, we solicited volunteers to participate in a year long strategic planning process. Approximately 100 employees from all parts of the state, representing a cross-section of all personnel classifications, agreed to participate in the project. At our kickoff meeting in August, training was provided, and the Situational Analysis Phase of the process began.

Three teams worked for the next three months to analyze the current environment:

*The Internal Assessment Team's assignment was to assess the Department's internal strengths and weaknesses. They identified and evaluated several subsystems of the Department -- financial, facilities and operations, human resources, information and communication, and organizational excellence.

*The External Assessment Team concentrated on identifying the changes outside the Department which will have a significant impact. Using a variety of data gathering techniques they identified changes in such areas as demographics, lifestyles, government, and technology.

*The Mission/Vision Team's objectives were to reach consensus on and to generate clear, concise statements of the Department's mission and vision, and to identify critical success factors necessary for the agency to be able to accomplish its mission and realize its vision. They met with employee groups from all over the state and held brainstorming sessions to gain broad-based input.

The results of these teams' work was presented in December. During early 1997, the Steering Committee will carefully study this information in order to develop strategies to move the Department forward. Then, an Implementation Team of employees will assist with the development of specific goals and action plans to implement the strategies throughout the Department.

It is an exciting process for the Department, and I look forward to working with you as we sharpen our focus in order to better meet the public health needs of Arkansas. This effort will build upon a tradition of service and commitment to protecting and improving the health of Arkansans, as evidenced by the following additional accomplishments in 1996.

Personal Health Services

*Began screening newborns for hearing loss in the hospital nursery setting. The purpose of the screenings is to provide for early detection of hearing loss which can affect speech, psycho-social, language and cognitive development.

*Reduced the number of syphilis cases by more than 20%. This follows the national trend of declining case rates.

*Amended the Rules & Regulations Pertaining to Communicable Disease Control to require the reporting of new and emerging diseases to include Enterhemorrhagic E Coli 0157-H7, Cryptosporidiosis, Hantavirus infection, Hepatitis C, and drug resistant Enterococci and to eliminate reporting requirements for 13 diseases which are no longer considered highly contagious and are seldom fatal.

Physicians were also requested to report blood lead levels over 10mg/dl for patients 14 years old or younger and levels over 25 mg/dl for patients 15 years old and up.

*Supplied vaccine for post exposure rabies treatment to 170 Arkansans because of exposure to an animal known or suspected to be rabid.

*Implemented newborn screening for galactosemia and an enzymimmunoassay quantitative fluorometric method for testing for newborn phenylalanine.

*Targeted causes of secondary disabilities for prevention efforts. A state strategic plan has been developed to increase the role of the agency in surveillance and prevention of secondary disabilities.

*Instituted gen-probe mycobacteria tuberculosis direct amplification technology in the Public Health Laboratory.

*Conducted a pilot study on the prevalence of chlamydia. Fourteen local health units submitted over 12,000 specimens, of which 7.2% were confirmed to have chlamydia.

*Restructured the maternal and infant home visiting program to improve the availability of services. 1,774 infants and their families were served in state fiscal year 1996.

*Completed the first full year of offering breast and cervical cancer screening to women age 50 and older who met income guidelines. Over 2,000 screening mammograms and pap smears were provided during FY96.

Environmental Health Services

*Intervened in the inactive Vertac Chemical Company site in Jacksonville, Arkansas, which is contaminated with dioxin (2,3,7, 8 tetrachloro dibenzodioxin) so that the site will be remediated by scrapping off all contaminated soil to 5 part per billion (ppb) or less of dioxin. The company originally was going to scrape soil down to 50 ppb.

*Assisted ATSDR in conducting a Health Assessment in El Dorado because of citizen complaints that

bromides from the Great Lakes Chemical Company were adversely affecting the health of the community. Air monitoring, soil and surface water testing and blood testing of more than 20 people living around the plant did not show any abnormal levels or contamination by bromide.

*Conducted 5 indoor air quality seminars across the state for school systems. These were attended by school officials, board members, nurses, and public health officials. This was funded by a \$30,000 grant from the U.S. Environmental Protection Agency.

*Conducted 90 mammography quality inspections under a U.S. Food and Drug Administration (FDA) contract.

*Revised the Rules and Regulations for Control of Sources of ionizing Radiation. The regulations affect approximately 270 radioactive material licensees and 2,370 x-ray registrants.

*Established a system to maintain inventory data involving the placement of nerve agent antidote kits in the vicinity of Pine Bluff arsenal for the Chemical Stockpile Emergency Preparedness Program.

*Participated in the Arkansas Chemical Stockpile Emergency Preparedness Programs (CSEPP) Community Exercise. The exercise assesses community medical capabilities in response to a chemical event in the area surrounding the Pine Bluff Arsenal. Work is ongoing with the State Office of Emergency Services (OES) to develop an emergency medical support program.

*Entered into a five year cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) to conduct necessary public health assessments, health consultations, health studies, community involvement and health education activities regarding superfund sites, CERCLIS sites, and mercury in fish along the Saline River Basin.

*Completed a pilot study in conjunction with the University of Arkansas at Pine Bluff to assess the environmental health issues in the Assessment Protocol for Excellence in Public Health (APEX-EH) planning system. The pilot project focused on compiling primary and secondary data on potential environmental health threats and the level of local concern about environmental health issues.

Technical and Support Services

*Updated and modified the blood lead database. The data base collects information from clinics, private physicians, hospitals and commercial laboratories on children and individuals who have been identified with high blood lead levels.

*Conducted satellite video conferences on a variety of topics:

Nutrition: Making a Difference in Schools for nutritionists, home economists, health educators, school food service personnel, physical education faculty, and business and community leaders.

Getting Kids Moving: Nutrition for Fitness and Sports for over 400 participants interested in the nutrition needs and nutrition problems encountered with children involved in both organized and individual fitness/sports programs.

Domestic Violence: Breaking the Cycle. After the two hour teleconference a panel of local and state experts responded to questions from on-site participants.

Surveillance of Vaccine Preventable Diseases, a three hour course for physicians and nurses.

Epidemiology and Prevention of Vaccine Preventable Diseases, two 12 hour courses presented to physicians and nurses. Continuing Education Units and Medical Education Units were offered.

Immunization Update for public health professionals, physicians, and nurses.

*Targeted Hispanic women in the Campaign for Healthier Babies by developing ads, posters, and Happy Birthday Baby Books in Spanish.

*Developed a Cultural Diversity Training Module and trained public health personnel in Arkansas and Alabama.

*Sponsored the first beginners course in cancer registry operations for hospitals across the state Registrars were introduced to the cancer patient data management system.

*Assisted 108 businesses and civic groups in providing educational and promotional materials to guide in the development of drug-free workplace programs through the "Drugs Don't Work" campaign.

*Implemented, with the University of Arkansas at Pine Bluff, the Delta Assessment Center for Drug and Alcohol Prevention The Center will provide technical assistance and program monitoring to community-based alcohol, tobacco and other prevention programs in the following Arkansas Delta counties Arkansas, Ashley, Chicot, Crittenden, Cross, Desha, Drew, Jefferson, Lee, Lincoln, Mississippi, Monroe, Phillips, Poinsett, St. Francis, and Woodruff.

*Coordinated the statewide Arkansas observance of the annual national "Treatment Works!" campaign to promote alcohol and drug abuse treatment.

*Implemented "The State Health Data Clearing House Act" of 1995. The Act authorizes the Department of Health to establish an information base for patients, health professionals and hospitals in order to improve the usage of health care services.

*Initiated the Water Wizard Education Program. The program trains and equips volunteers and helps them develop science presentations about the magic of water treatment. Over \$25,000 worth of equipment was distributed to twelve sites across the state.

*Conducted several workshops:

Nutrition Assessment Workshop for nurses, nutritionists, and home economists at WIC statewide Partners in Growth Conference. The program provided an update on the anthropometric, biochemical, clinical, diet

and socio-economic components of nutrition assessment.

Nutrition: A Vital Link in Health Services for a Special Population for nurses and nutritionists from Iowa, Oklahoma, Arkansas, and Missouri at the Nutrition and Mental Health Issues Conference. The program provided an update on the best practice for the nutritional management of gestational diabetes.

Food Safety Workshop, with the U.S. Food and Drug Administration and the Educational Foundation of the National Restaurant Association, for sanitarians and representatives from the food industry, including restaurant managers and other state agencies. The two day course focused on identifying critical areas of food service that must be properly monitored in order to avoid foodborne illnesses.

Toxic Chemical Training Course for Hospital Personnel, in conjunction with the Office of Emergency Services, for physicians, nurses, paramedics and hospital safety officers from 19 hospitals and two ambulance services. Participants were taught to recognize the clinical signs and symptoms of nerve and mustard agent exposure and appropriate therapeutic interventions for treating these patients in the hospital emergency department, decontamination procedures, personal protective equipment and emergency department planning considerations.

*Conducted a survey of how other public health laboratories perform, interpret and report HIV results. The findings were presented at the National Retroviral Testing Symposium.

Collaboration/Partnerships

*Updated Operation Kid Care brochures, speakers kits and "Checkup Checkbooks." Arkansas' First Lady Janet Huckabee was named as the honorary chair. Sponsors of Operation KidCare included Arkansas Blue Cross and Blue Shield, Arkansas Children's Hospital, Arkansas Department of Health, Arkansas Department of Human Services, Arkansas Methodist Hospital in Paragould, Northwest Medical Center in Springdale, St. Bernards Regional Medical Center in Jonesboro, St. Mary's Hospital in Rogers, St. Vincent Infirmary Medical Center, and Washington Regional Medical Center in Fayetteville.

*Unveiled a map at the State Capitol showing each county which has attained its goal of immunizing at least 90% of children by the age of two. As of December 1996, 40 of the 75 counties had achieved this milestone. This project is in partnership with Arkansas' Shots for Tots.

*Collaborated with the National Kidney Foundation of Arkansas to develop a program to provide high blood pressure education and screening to residents of Pulaski and Lonoke counties. The program goal is to reduce the incidence of kidney disease, heart disease, and stroke among minority communities in these counties.

*Collaborated with the Arkansas Health Care Access Foundation to provide access to voluntary medical services for women needing diagnostic follow-up who were identified through the Breast and Cervical Cancer Control Program. Over 190 women have received services.

*Developed a partnership with Essential Spanish Seminars to teach Spanish classes to Department employees. The course lasts eight weeks and is free to employees on a "first come, first served" basis.

*Expanded the 5-A-Day for Better Health Coalition, both in active membership and activities. Participating coalition agencies include Cooperative Extension Service, AARP, Baptist Health, UAMS, Department of Education, Arkansas Radio Network, Conway Regional Fitness Center, Arkansas Dietetic Association, and individuals including Willie Oates.

*Developed the Referral, Assessment and Placement (RAP) System to assist in the placement of court committed individuals into substance abuse treatment within Pulaski County. Two substance abuse counselors working with the Pulaski County Probate Court and central Arkansas substance abuse treatment programs evaluate patients and coordinate placements to ensure a smooth transition into treatment.

*Implemented the Regional Alcohol and Drug Detoxification (RADD) Program to provide detoxification services to substance abusing individuals in thirteen (13) different regions of the state. This was a collaborative effort between the Bureau of Alcohol and Drug Abuse Prevention, its funded treatment providers, local mental health centers and Ouachita County Medical Center. The RADD Program services increased detoxification services to the citizens of the state of Arkansas by 72% in the first six (6) months of operation.

*Contracted with the Arkansas Department of Human Services to provide Medicaid Outreach and Education services to Medicaid recipients and Medicaid primary care providers. Services include 24-hour access to answers concerning issues related to the Medicaid Primary Care Case Management Program.

*Served as a partner in the Delta Health Education Partnership Project. This is a multi-state consortium funded by the Robert Wood Johnson Foundation to plan community-based educational programs for primary health care providers within the lower Mississippi Delta region.

*Worked with Cooperative Extension Service Home Economists from the Southwest and Southeast districts to educate communities in south Arkansas regarding mercury in fish. Developed a coloring book for children from grades 1-3 to use for raising the awareness of children and their parents regarding this issue.

Special Recognition

*Recognized for excellence in early enrollment of pregnant women in the WIC Program. Local health

unit staff are diligent in the enrollment of pregnant women, coupled with a toll-free information line and the availability of the Happy Birthday Baby Book through the Campaign for Healthier Babies, has lead to an increased number of women being served earlier in their pregnancy.

*Selected for inclusion in the National Database of Exemplary Child Abuse Prevention Programs. The A-Plus (Adolescent Parents Learning Useful Skills) Program is a Washington County based pregnant and parenting teen support program which has been in existence since 1988.

*Won the 1996 National Gold Award for Excellence in Public Health Communication from the National Public Health Information Coalition for the press kit developed for 5-A-Day Week.

*Worked with state and local groups to expand the Smoke Detector Program, resulting in it being named a national model by the National Center for Injury Prevention and Control of CDC.

*Received a national award for the Keep Illegal Cigarettes from Kids (KICK) campaign. The campaign received the 1996 Vision Award from the Association of State and Territorial Health Officials for excellence in public health through innovation. KICK also received two Bronze Quill Awards from the International Association of Business Communicators.

*Received the Healthy Mothers, Healthy Babies National Achievement Award for Outreach to Hard-to-Reach Populations for the Delta Community Integrated Service System project.

*Was presented the prestigious "Telly" award for the Campaign for Healthier Babies television commercial, "Don't Be A User," which pointed out the dangers of drug abuse by pregnant women.

*Received the Commissioner's Special Citation from the Food and Drug Administration's Center for Devices and Radiological Health for outstanding collaboration in working with FDA on inspecting mammography facilities.

*Received the Category II Quality Commitment Award in recognition of employee commitment to total quality management principles in Management Area VI.

*Awarded two Silver awards by the National Public Health Information Coalition for Excellence in Communication for a radio public service announcement and a feature release.

Grants and Funding

*Entered into a five year cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) for capacity building in environmental health. The Arkansas Department of Health will be awarded \$219,876 annually to expand environmental health activities.

*Received a five year, \$540,000 grant from the Centers for Disease Control and Prevention to implement a

Pregnancy Risk Assessment Monitoring System (PRAMS). Information will be collected concerning a mother's experience with the health care system during pregnancy and delivery, as well as postpartum care for both the mother and infant. Information will also be collected on maternal behaviors and experiences which might have influenced the outcome of the pregnancy and the health of the infant.

*Awarded 20 rural health services revolving grants to communities to enhance their local healthier delivery systems.

*Awarded grants to 25 rural physicians who are participating in the Rural Physicians Incentive Program.

*Approved funding through the State Health Building and Local Grant Trust Fund for the following: \$450,000 for construction of a new local health unit in Marion County - Yellville; minor grants to Johnson County - Clarksville, \$575; Pope County - Russellville, \$7,589; Pulaski County - Central Unit, \$9,874.

*Submitted requests through the Arkansas Economic Development Program (AEDP) of the Arkansas Industrial Development Commission, Community Assistance Division for construction of new local health units in Union County - El Dorado, Saline County - Benton, Poinsett County - Trumann and Woodruff County - Augusta.

*Received a \$5,000 grant from the Department of Health and Human Services Region VI Office of Minority Health to support the Arkansas Minority Health Summit.

*Initiated plans to develop a State Revolving Fund (SRF) for Drinking Water in Arkansas. The Department is establishing priorities for the program and will maintain oversight. The initial authorization could provide up to \$12,500,000 to Arkansas as an SRF capitalization grant. The majority of the funds will be available to Arkansas water systems as low-interest loans for capital improvements to assure their compliance with the Safe Drinking Water Act.

*Awarded 24 community-based youth violence prevention grants for a total of \$989,586, through the Common Ground Program for Arkansas Communities. The program is to "act as a bridge" connecting and assisting government, communities and citizens to build a more responsive human, educational, and economic system where children and families can thrive.

*Provided treatment service grants for dual diagnosis clients (clients with a substance abuse and psychiatric problem) to encourage substance abuse treatment services to this underserved population.

*Awarded Prevention Service Program grants to 25 community-based non-profit organizations to implement alcohol, tobacco and other drug abuse prevention activities that target high-risk youth. Four \$10,000 grants and 21 \$20,000 grants were funded.

*Awarded eight Community Coalition grants to local community groups for planning and implementing alcohol, tobacco and other drug abuse programs.

*Awarded funding to four local education agencies to provide classroom instruction by a uniformed law enforcement officer on alcohol, tobacco and other drug education.

*Awarded four youth conference grants to community-based non-profit organizations to host alcohol, tobacco and other drug education and prevention workshops targeting junior high and senior high school students.

*Awarded nine Delta Initiative Program grants to provide culturally sensitive alcohol and drug abuse prevention programs for high risk minority youth who reside in the Delta region. Programs were funded in the communities of Augusta, Marvell, Earle, Holly grove, Marianna, Stuttgart, Pine Bluff, Eudora, and Dermott.

*Awarded mini-grants to 11 local coalitions for tobacco control and prevention. The grants are aimed at reducing youth access to tobacco, reducing exposure to second-hand smoke in public places, and making the public aware of the problems associated with tobacco.

*Received funding from the Maternal and Child Health Bureau for an epidemiology program in Perinatal Health. The program will evaluate the state's perinatal health status and enhance the analytical capabilities of the state regarding issues concerned with infant mortality and low birth weight.

*Received a three-year grant from the U.S. Department of Agriculture, Food and Consumer Service, to develop a methodology for determining local clinic costs and predicting local costs of providing services through the Supplemental Nutrition Program for Women, Infants and Children (WIC).

*Received a grant from the Centers for Disease Control and Prevention for Diabetes Prevention and Control. The main components of the grant include assessment of interventions and capacity building.

*Received funding from the Maternal and Child Health Bureau to continue the Delta Community Integrated Services System project. This project trains and uses lay personnel to improve immunization levels and provide for adequate day care.

*Was awarded a State Systems Development Initiative grant from the Maternal and Child Health Bureau to establish a statewide planning process for coordination of comprehensive community based health services and community systems of care for children and families, including Children with Special Health Care Needs.

*Received a two-year contract from the Department of Human Services to provide Lead Poisoning Education. The target audience includes, but is not limited to children, parents, day care operators, and teachers.

The three counties involved include Union, Phillips and Pulaski.

What's Ahead

1997 promises to be another exciting year at the Arkansas Department of Health. We will continue to develop our strategic plan and will begin to implement strategic management. We look forward to working with you to help assure conditions which encourage a healthier quality of life for people in the state.

Table 1
Personal Health Services - Selected Statistics

Services	FY96
Maternal and Child	
Child Health Patients	39,376
EPSDT Screenings	59,362
Family Planning Patients	74,782
Maternity Patients	17,955
WIC Clients Served	150,370
Communicable Disease Control	
AIDS Testing and Counseling	71,580
TB Skin Test	77,403
Immunizations	
HIB	108,122
Polio	118,271
DPT	141,606
MMR	77,902
Hep B	104,784
In Home Services	
Patient Admissions	23,243
Recovering Patient Visits	541,683
Chronic Patient Visits	84,736
Frail Patient Visits	1,040,059
Hospice Patient Days	37,320
Substance Abuse Treatment	
Adults Served	13,186
Adolescents Served	784
Regional Alcohol and Drug	
Detoxification (RADD) Patients Served	1,922

Table 2
Services to Protect the Environment and Health of the General Public - Selected Statistics

Services	FY96
Environmental Complaints	
Investigations	7,039
Food Service Establishment	
Inspections	17,084

Laboratory Samples Analyses

Laboratory Samples Analyses	488,109
Milk and Dairy Farm Inspections	7,444
Protective Health Codes Licenses Issued	12,681
Public Swimming Pool Inspections	3,196
Radiological Equipment Inspections	676
Septic Tank Permits	6,304
Water and Wastewater Plans Reviews	3,173

Arkansas Health Care Access Foundation, Inc. Joe Colclasure, MD, President

"I wanted to thank everyone involved with this program. We had no one else to turn to, and we were in desperate need of doctors and medications. Your program has helped us through a very difficult time."

At the Arkansas Health Care Access Foundation, we receive many thanks from those who have benefited from the help of our volunteers. Through the combined efforts of many, individuals receive medical care that otherwise would have been unavailable to them.

The Arkansas Health Care Access Foundation (AHCAF) has again seen an increase in interest and enrollment in the Access to Care program. The Department of Human Services Medicaid Offices as well as County Health Units continue to act as points of entry into the referral system.

Currently, there are over 6,400 active applications in our system. Our numbers grew substantially when an article was published detailing our program in the Arkansas Democrat-Gazette in June of last year. We received an unprecedented number of phone calls, and our application volume tripled in one month. Only within the last few months have the calls returned to our standard levels. Additional publicity was generously donated by KATV, Channel 7, through a public service announcement which aired frequently in 1996. Inquiries increased dramatically each time that announcement was aired. Approximately \$100,000 in air time has been provided by Channel 7 on behalf of AHCAF.

The Foundation continues its work of coordinating with the Arkansas Department of Health's Breast

and Cervical Cancer Control Program (BCCCP) in assisting poor, uninsured Arkansas women in obtaining further diagnosis and treatment as needed. From November '95 through January '97, more than 190 women screened through the BCCCP program have received donated office visits, evaluation, radiology, pathology, anesthesiology, oncology, surgery and hospitalization from AHCAF volunteer professionals. Needless to say, we are most thankful for you and your caring staff who have allowed these women access to lifesaving care that they otherwise might not have received.

The Foundation is also exploring the possibility of assisting in the establishment of a dental care program for needy, low-income Arkansans. At press time, a bill has been signed by Governor Huckabee to establish the Donated Dental Services program. We have pledged our help in seeing the program to become a success.

With an increase in enrollment, we have called on Arkansas' hospitals to provide services more than ever before. They have been most supportive and cooperative, and we are grateful for their dedication in providing a wide variety of in-patient and out-patient services. Their willingness to work with AHCAF lends great support to the physicians treating our referred patients.

Since July 1, we have processed over 8,000 phone calls. In a continuing effort to expand the types of services to the medically indigent in Arkansas, the Foundation is reaching across health care boundaries by working in a cooperative effort with other health organizations in the state. Since last February, we have made over 795 other referrals for services outside our program. The Arkansas Health Care Access Foundation boasts over 1,000 physician volunteers, which is up from 860 in 1989. This entire AHCAF network of over 1,700 health professionals, consisting of physicians, dentists, pharmacists, podiatrists, hospitals, home health agencies, the Arkansas Department of Health, and the Arkansas Department of Human Services, has "insured" almost 45,000 needy Arkansans at an annual cost of approximately \$15.00 per year, per patient.

Special acknowledgment and thanks is owed to Pfizer, Johnson & Johnson, and SmithKline Beecham Pharmaceuticals, who continue to make their products available through our program. By providing their products at no charge to the patient, they have helped ensure continuity of care. Additionally, they have assisted by donating the printing of our brochures, applications, and other forms.

In addition to these pharmaceutical companies, we are currently working with two other well-known manufacturers to provide two groups of drugs currently not donated through our program.

Recruitment of volunteers remains a high priority

for the Foundation. Medical professionals are recruited on a regular basis and continue to generously and compassionately provide much needed care. Our staff remains active in participating in workshops, in-services and talk shows to help promote the Foundation's work. This past year, at each association conference, we presented an "Outstanding Spirit of Service" award recognizing a special volunteer in each field. These awards were made possible by a generous grant from SmithKline Beecham Pharmaceuticals.

Support from all sectors of the health care community has proven to be a key to maintaining a successful program. Our volunteers continue a commitment to serve those Arkansans who are poor and medically uninsured. Thank you for making AHCAF the type of program that has made a difference in many lives.

If you are interested in knowing more about this method of providing care to Arkansas' indigent, please contact one of the physician board members listed below or call 1-800-950-8233.

Joe Colclasure, MD - Little Rock	227-5050
Simmie Armstrong, MD - Pine Bluff	535-6461
Charles Chalfant, MD - Fort Smith	484-7100
Rep. Scott Ferguson, MD - W. Memphis	735-5555
Leslie Anderson, MD - Lonoke	676-5123
Paul Wallick, MD - Monticello	367-6867
Ray Biondo, MD - Sherwood	835-6512
L.J. Patrick Bell, MD - Helena	338-8163
C.E. Ransom, Jr., MD - Searcy	268-5845

Arkansas State Medical Board

Peggy Pryor Cryer, Executive Secretary

The 1996 members and officers of the Arkansas State Medical Board are as follows: W. Ray Jouett, M.D., Chairman; Warren M. Douglas, M.D., Vice-Chairman; Alonzo Williams, M.D., Secretary; John Currie, Sr., Treasurer; J. R. Baker, M.D.; John E. Bell, M.D.; Owen Clopton, M.D.; Steven Collier, M.D.; Ted J. Feimster; David C. Jacks, M.D.; C.E. Tommey, M.D.; Rhys Williams, M.D.; and James Zini, D.O.

The Board met quarterly and addressed complaints, hearings and other pertinent business affecting health care in the State of Arkansas.

The 1996 Licensing Statistics are: Medical Doctors and Doctors of Osteopathy licensed - 466; Medical Doctors and Doctors of Osteopathy (total) - 7,514; Medical Doctors and Doctors of Osteopathy (in state) - 4,707; Occupational Therapist Licensed - 149; Occupational Therapist - 639; Occupational Therapist Assistants Licensed - 38; Occupational Therapist Assistants - 106; Physician Trained Assistants - 40; Respiratory Care Therapist Licensed - 187; Respiratory Care Therapist - 1,059.

Summary of the Board's proceedings for 1996: Individual Complaints and Discussions - 272; Show

Cause Orders Issued - 22; Suspended License - 12; License placed on Probation - 15; Monetary Fine - 8; Physicians requested to appear for further discussion - 14; Physicians required to notify Board before practicing in the state - 6; Revoked - 5; Overtreating - 4; Billed for services not performed - 1; Rights violated - 2; Reviewed for 2nd time - 18.

Nature of Complaints: Quality of care issues - 72; Communication or doctor/patient conflicts - 40; Emergency room treatment - 2; Alcohol/Drugs - 9; Billing Discrepancies - 13; Lack of Physician response to patient - 4; Failure to release medical records - 5; Overcharging - 3; Sexual Harassment - 4; Actions taken by other State Boards - 6; Overtesting - 4; Over prescribing - 11; Practicing/allowed to practice with out a license - 4.

Public Hearings were held on Regulation #8 and #10. Regulation #8 was repealed. Regulation #10 changes the fee and licensing requirements of Respiratory Care Therapist.

Financial Report

	1996
Assets	
Current Assets	
Cash	\$570,756
Certificates of deposit	1,217,283
Accrued interest receivable	15,886
Total Current Assets	\$1,803,925
 Fixed Assets - at cost	
Furniture, fixtures and equipment	\$105,736
Less: accumulated depreciation	(64,014)
Net Fixed Assets	\$41,722
Total Assets	\$1,845,647
 Liabilities and Net Assets	
Current Liabilities	
Deferred income	\$85,770
Accrued unused vacation pay	17,815
Total Current Liabilities	\$103,585
Net Assets, Unrestricted	\$1,742,062
Total Liabilities and Net Assets	\$1,845,647

Regulations Passed by the Board and/or Amended

Regulation 17 - Continuing Medical Education

Passed 9/96

A. Pursuant to Ark. Code Ann. 17-80-104, each person holding an active license to practice medicine in the State of Arkansas shall complete twenty (20) credit hours per year of continuing medical education. One hour of credit will be allowed for each clock hour of participation and approved continuing education activities, unless otherwise designated in Subsection B below.

B. Approved continuing medical education activities

include the following:

1. Internship, residency or fellowship in a teaching institution approved by the Accreditation Counsel for Graduate Medical Education (ACGME) or programs approved by the American Osteopathic Association Council on Postdoctoral Training or the American Medical Association or the Association of American Medical Colleges or the American Osteopathic Association. One credit hour may be claimed for each full day of training. No other credit may be claimed during the time a physician is in full-time training in an accredited program. Less than full-time study may be claimed on a pro-rata basis.

2. Education for an advanced degree in a medical or medically related field in a teaching institution approved by the American Medical Association or the Association of American Medical Colleges or the American Osteopathic Association. One credit hour may be claimed for each full day of study. Less than full-time study may be claimed on a pro-rata basis.

3. Full-time research in a teaching institution approved by the Liaison Committee on Medical Education (LCME) or the American Osteopathic Association Bureau of Professional Education or the American Medical Association or the Association of American Medical Colleges or the American Osteopathic Association. One credit hour may be claimed for each full day of research. Less than full-time study may be claimed on a pro-rata basis.

4. Activities designated as Category 1 or 2 by an organization accredited by the Accreditation Council on Continuing Medical Education or a state medical society or be explicitly approved for Category 1 or 2 by American Medical Association, or the Arkansas State Medical Board, or by the Council on Continuing Medical Education of the American Osteopathic Association. Activities designated as *prescribed hours* by the American Academy of Family Physicians.

5. Medical education programs may also be claimed for credit if said medical education programs have not been designated for specific categories referred to in Number 4 above, and are designed to provide necessary understanding of current developments, skills, procedures or treatment related to the practice of medicine.

6. Serving as an instructor of medical students, house staff, other physicians or allied health professionals from a hospital or institution with a formal training program, where the instruction activities are such as will provide the licensee with necessary understanding of current developments, skills, procedures or treatment related to the practice of medicine.

7. Publication or presentation of a medical paper, report, book, that is authored and published, and deals with current developments, skills, procedures or treatment related to the practice of medicine. Credits may be claimed only once for materials, presented. Credits

may be claimed as of the date of the publication or presentation. One credit hour may be reported per hour of preparation, writing and/or presentation.

8. Credit hours may be earned for any of the following activities which provide necessary understanding of current developments, skills, procedures or treatment related to the practice of medicine: (a) completion of a medical education program based on self-instruction which utilized videotapes, audiotapes, films, filmstrips, slides, radio broadcasts and computers; (b) independent reading of scientific journals and books; (c) preparation for specialty Board certification or recertification examinations; (d) participation on a staff committee or quality of care and/or utilization review in a hospital or institution or government agency.

C. If a person holding an active license to practice medicine in this State fails to meet the foregoing requirements because of illness, military service, medical or religious missionary activity, residence in a foreign country, or other extenuating circumstances, the Board upon appropriate written application may grant an extension of time to complete same on an individual basis.

D. Each year, with the application for renewal of a active license to practice medicine in this State, the Board will include a form which requires the person holding the license to certify by signature, under penalty of perjury, that he or she has met the stipulated continuing medical education requirements. In addition, the Board may randomly require physicians submitting such a certification to demonstrate, prior to renewal of license, satisfaction of the continuing medical education requirements stated in his or her certification. A copy of an American Medical Association Physician's Recognition Aware (AMA PRA) certificate awarded to the physician and covering the reporting period shall be bona fide evidence of meeting the requirements of the Arkansas State Medical Board. A copy of the American Osteopathic Association or the State Osteopathic Association certificate of continuing medical education completion or the American Osteopathic Association's individual activity report shall be bona fide evidence of meeting the requirements of the Arkansas State Medical Board.

E. Continuing medical education records must be kept by the licensee in an orderly manner. All records relative to continuing medical education must be maintained by the licensee for at least three (3) years from the end of the reporting period. The records or copies of the forms must be provided or made available to the Arkansas State Medical Board upon request.

F. Failure to complete continuing medical education hours as required or failure to be able to produce records reflecting that one has completed the required minimum continuing medical education hours shall be a violation of the Medical Practice Act and may result in the licensee having his license suspended and/or revoked.

G. A person may apply to the Board for a waiver from the continuing medical education requirements stated herein if he has a license to practice medicine in the State of Arkansas, is willing to enter a sworn statement to the Board that he is retiring from the active practice of medicine and will not practice medicine in the future, he may present his application to the Board for said exemption.

Regulation 18 - For Schedule for Centralized Verification Service - Passed 06/96

Pursuant to Ark. Code Ann. 17-95-105-(c)(6) provides that the Board may charge credentialing organizations fee for the use of credentialing services.

A. Initial fee to be charged to accrediting organizations per number of physicians to be credentialed:

<u>Number of Physicians</u>	<u>Fee</u>
0-199	\$100.00
200-499	\$250.00
500 and above	\$400.00

B. Annual renewal fee for all accrediting organizations utilizing this centralized verification services: \$50.00 per year

C. Fees for individual information requests:

<u>Service</u>	<u>In State</u>	<u>Out of State</u>
Initial Licensure Information	\$50.00	\$75.00
Renewal Information	\$20.00	\$35.00
Detailed Verifications	\$15.00	\$20.00

Regulation 19 - Pain Management Programs - Passed 12/96

A. Physicians operating a pain management program for specific syndromes...that is headache, low back pain, pain associated with malignancies, or temporomandibular joint dysfunctions...are expected to meet the standards set forth in this section or in fact be in violation of the Medical Practices Act by exhibiting gross negligence or ignorant malpractice.

B. Definitions:

1. Chronic Pain Syndrome: Any set of verbal and/or non-verbal behaviors that: (1) involves the complaint of enduring pain, (2) differs significantly from a person's premorbid status, (3) has not responded to previous appropriate medical and/or surgical treatment, and (4) interferes with a person's physical, psychological and social and/or vocational functioning.

2. Chronic Pain Management Program provides coordinated, goal-oriented, interdisciplinary team services to reduce pain, improving functioning, and decrease

the dependence on the health care system of persons with chronic pain syndrome.

C. The following standards apply to both inpatient and outpatient programs and the physician should conform to the same.

1. There should be medical supervision of physician prescribed services.

2. A licensee should obtain a history and conduct a physical examination prior to or immediately following admission of a person to the Chronic Pain Management Program.

3. At the time of admission to the program, the patient and the physician should enter into a written contract stating the following:

- a. The presenting problems of the person served.
- b. The goals and expected benefits of admission.
- c. The initial estimated time frame for goal accomplishment.
- d. Services needed.

D. In order to provide a safe pain program, the scope and intensity of medical services should relate to the medical care needs of the person served. The treating physician of the patient should be available for medical services. Services for the patient in a Chronic Pain Management Program can be provided by a coordinated interdisciplinary team of professionals other than physicians. The members of the core team, though each may not serve every person should include:

- a. A Physician.

b. A clinical psychologist or psychiatrist.

c. An occupational therapist.

d. A physical therapist.

e. A rehabilitation nurse.

E. A physician managing a Chronic Pain Management Program to a patient should meet the following criteria:

1. Three years experience in the interdisciplinary management of persons with chronic pain.

2. Participation in active education on pain management at a local or national level.

3. Board certification in a medical specialty or completion of training sufficient to qualify for examinations by members of the American Board of Medical Specialties.

4. Two years experience in the medical direction of an interdisciplinary Chronic Pain Program or at least six (6) months of pain fellowship in an interdisciplinary Chronic Pain Program.

The Physician must have completed and maintained at least one (1) of the following:

5. Attendance at one (1) meeting per year of a regional and national pain society.

6. Presentation of an abstract to a regional national pain society.

7. Publication on a pain topic in a peer review journal.

8. Membership in a pain society at a regional or national level.

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"GETTING STARTED IN MEDICAL PRACTICE"

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YOUNG PHYSICIANS SEMINAR

IN CONJUNCTION WITH THE
ARKANSAS MEDICAL SOCIETY'S 1997 ANNUAL SESSION
ARLINGTON HOTEL, HOT SPRINGS, ARKANSAS

MAY 1, 1997
1:00 - 3:30 P.M.

A PRACTICE MANAGEMENT WORKSHOP FOR PHYSICIANS WHO PLAN TO

- DEAL WITH HMOS, IPAS, ETC.
- JOIN A PARTNERSHIP OR GROUP PRACTICE
- SEEK AN EMPLOYMENT CONTRACT
- GO SOLO

PRACTICE ALTERNATIVES

A broad range of practice possibilities are open. We will examine the options and cover the essential points of each alternative in order to make rational decisions.

- Solo practice - advantages and disadvantages
- The pro and cons of group practice
- Ownership options - partnerships vs. professional corporations
- Salary and income distribution formulas
- Expense-sharing associations

NEGOTIATIONS

Everything can be negotiated before a deal is put together. Almost nothing is negotiable after the deal is signed. Avoid critical errors and develop arrangements designed for long term, mutual success.

- What should be in your employment agreement
- Strategies for successful group practice agreements
- Opportunities and pitfalls
- Buying into a practice

FINANCIAL CONSIDERATIONS

Learn the business side of medical practice. Find out how patients and insurers pay your practice. What collection techniques are sensitive to patient needs, yet produce maximum results?

- How patients pay for their services
- Understanding good collections policies and procedures
- How to deal with health insurers
- How to measure the financial health of your practice

DEALING WITH MANAGED CARE

Financial arrangements with third party payers have changed how physicians provide services. Find out exactly how managed care works and how it may affect practice decisions.

- Understanding HMOs, PPOs and IPAs
- How managed care affects revenues and patient management
- Fee-for-service vs. capitation - trends and issues

CONTINUING MEDICAL EDUCATION CREDIT

St. Joseph's Regional Health Center is accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. St. Joseph's Regional Health Center designates this continuing medical education activity for 2.5 credit hours of Category I of the Physician's Recognition Award of the American Medical Association.

REGISTRATION FORM

Complete and return with your payment to: Arkansas Medical Society, P. O. Box 55088, Little Rock, Arkansas 72215-5088

REGISTRATION FEE: Pre-paid: \$10 Member
 \$15 Non-member

Onsite: \$20 Member
 \$25 Non-member

Name _____

Phone _____

Address _____

City/State/Zip _____

Refunds will be given if cancellation notice is received three days prior to the seminar.

1997 MED-PAC Contributors

(As of February 28, 1997)

Arkansas County Hoy B. Speer, Jr. Marolyn N. Speer	Faulkner County Phillip Stone	Pope County Jody Callaway William W. Galloway Ted Honghiran James M. Kolb, Jr. Douglas H. Lowrey	Union County Wayne G. Elliott Walter J. Giller Bradley Harbin Mrs. Bradley Harbin Diana Jucas Minna Ulmer
Ashley County James Rankin	Garland County Robert V. Borg Jesus A. Plaza		
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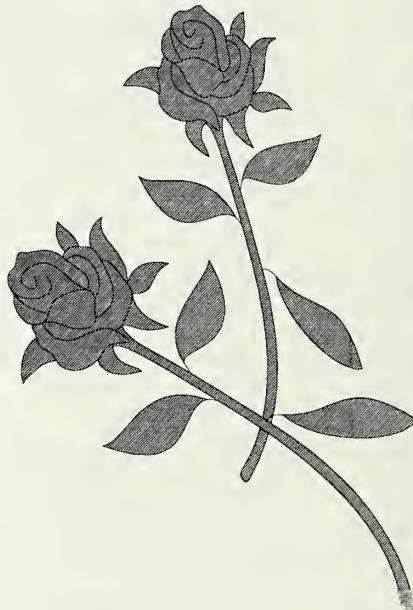
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Memorials

Members of the Arkansas Medical Society and Alliance who have died this past year will be remembered during the opening House of Delegates beginning at 5:00 p.m., Thursday, May 1, 1997, at the Arlington Hotel in Hot Springs. Members to be honored are:

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J. David Talley, M.D.*

Low-Molecular Weight Heparins

Low-molecular weight heparins (LMWH) are new anticoagulants. This review will cover the cardiovascular aspects of these new agents.

Mechanism of Action. Heparin was initially described in 1916 and since then has been of substantial clinical benefit in a variety of hypercoagulable and thromboembolic conditions.¹ The association of anticoagulation and antithrombotic activity is due to the mechanism of action of heparin (Figure 1, left panel). Heparin induces a conformational change in the plasma protein, antithrombin III. Activated antithrombin III can inactivate Factor Xa by itself, thereby inhibiting anticoagulation. However, thrombin (factor IIa) inhibition requires both heparin and activated antithrombin III. This dual action of heparin, to inhibit both factor Xa and thrombin, is the reason why heparin is both an anticoagulant and an antithrombin.

LMWHs were developed to dissociate the properties of anticoagulation and antithrombin activity of heparin. These molecules are created by shortening the length of the heparin chain. Varying the length of the heparin side chains account for the variation in molecular weight, relative activities against Xa and IIa, plasma clearance, and dosage regimens of the various LMWHs.

Like heparin, LMWH activates antithrombin III (Figure 1, right panel). Activated antithrombin III inhibits Factor Xa in a fashion similar to heparin; but thrombin is not inhibited because it requires both activated antithrombin III and the longer side chains of heparin. Thus, LMWHs are relatively selective inhibitors of factor Xa, but have little effect on thrombin (by a factor of 3-4:1). LMWHs also have several other important differences from standard unfractionated heparin. Importantly, LMWHs are almost completely absorbed with subcutaneous administration, need to be administered once to twice daily, and do not require dose adjustment based on laboratory monitoring. They also do not cause hemorrhage, thrombocytopenia, or osteoporosis.

Clinical indications. The approved indications for LMWHs vary by country. Enoxaparin (Lovenox®, Rhone-Poulenc Rorer Pharmaceuticals, Inc., Collegeville, PA, USA) the only FDA approved LMWH, is used as prophylaxis of venous thromboembolic disease associated with moderate to high-risk orthopedic surgeries. In other countries, enoxaparin is used to prevent venous thromboembolism in patients undergoing general or cancer surgery, as treatment of deep venous thrombosis, and to prevent thrombus formation during extracorporeal circulation for hemodialysis.^{2,3,4}

Effect on restenosis. Neither enoxaparin and reviparin (Knoll Ag, Ludwigshafen, Germany) reduced the rate of restenosis in ERA (Enoxaparin Restenosis) trial or the REDUCE (Reduction of Restenosis After PTCA, Early Administration of Reviparin in a Double-Blind, Unfractionated Heparin and Placebo-Controlled Evaluation) study respectively.^{5,6} While both heparin and LMWHs inhibit smooth muscle cell proliferation *in vitro*, animal models of restenosis are notoriously misleading in reproducing the human condition. Additionally, the dose of the agent may have been too low in the clinical trials.

Unstable angina or non-Q-wave MI. LMWHs stabilize the clinical course of patients who present with an acute ischemic coronary event (table 1). A small, open-label study showed that nadroparin decreased the occurrence of MI compared with aspirin alone or the combination of aspirin and heparin.⁷ Enoxaparin significantly reduced the combined endpoint of death, MI, or recurrent angina pectoris compared with heparin in the ESSENCE (Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q wave Coronary Events) trial.⁸ There was a 63% reduction in relative risk of death or MI (1.8% vs. 4.7%, $p=0.001$) when dalteparin was added to aspirin in the FRISC (Fragmin During Instability in Coronary Artery Disease), (Fragmin®, Pharmacia, Sweden) study.⁹ Conflicting data were reported in the recent trial of inogatran where the combined endpoint of death or MI occurred in 0.7% of patients treated with heparin compared to 3.2% of patients

* Dr. Talley is with the Division of Cardiology, Department of Internal Medicine, at UAMS.

Table 1: Trials Using Low-Molecular Weight Heparin in Unstable Angina or Non-Q-wave Myocardial Infarction

	dalteparin (FRISC)	enoxaparin (ESSENCE)*	inogatran (Grip, et al.)	nadroparin (Gurfinkel, et al.)
No. of Patients	1506	3171	1209	219
LMWH (death, MI) %	4.7%	16.6%	3.2%	0%
Control (death, MI) %	1.8% (ASA) ASA + heparin	19.8% ASA + heparin	0.7% (heparin)	9.5% (ASA) t 6% ASA + heparin) tt
Relative risk reduction	-63%	-18%	NR	NR
P-value	0.001	0.018	<0.05	0.01 t 0.1 tt

Abbreviations: ASA = acetylsalicylic acid; ESSENCE = Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q wave Coronary Events; FRISC= Fragmin During Instability in Coronary Artery Disease; LMWH = low molecular weight heparin; MI = myocardial infarction; NR = not reported; NS = not significant ($p>0.05$)

Notes: *Endpoint data for the ESSENCE trial includes death, MI, or recurrent angina, the endpoint of the other trials is the occurrence of death or MI; t nadroparin compared to ASA; tt nadroparin compared to ASA + heparin

treated with the investigational medication.¹⁰ A large scale clinical trial (11 countries, 215 hospitals, and 3500 patients) is underway to test the efficacy and safety of an uninterrupted enoxaparin administration compared with heparin for the long-term out-patient management of unstable ischemic coronary syndromes.¹¹

Acute Myocardial Infarction. There is only limited experience with the use of LMWHs in the setting of acute MI. A non-randomized study demonstrated the dalteparin and aspirin were effective in decreasing the occurrence of ventricular thrombus after acute MI.¹²

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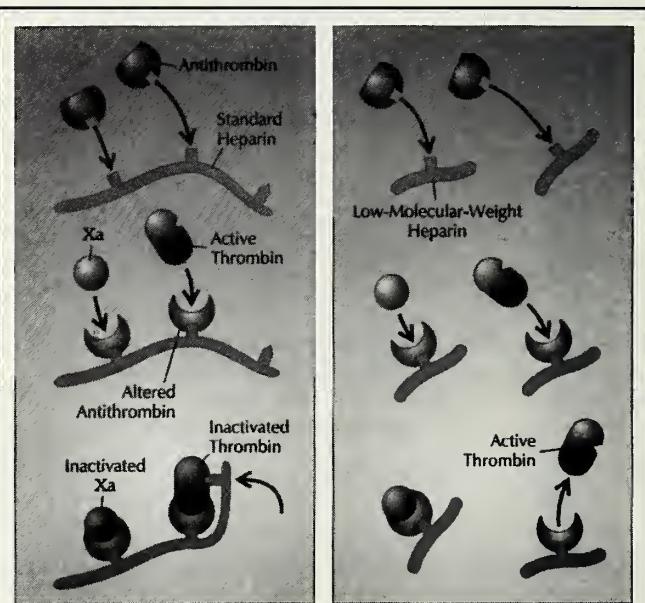


Figure 1: Left panel - The binding of heparin to antithrombin III changes the structure of antithrombin III allowing it to rapidly bind and inactivate factor Xa. To inactivate thrombin, both heparin and activated antithrombin are required.

Right panel - Low-molecular weight heparin also changes the structure of antithrombin III. Activated antithrombin III can, by itself, inactivate factor Xa. The shorter glycosaminoglycan side chains of low-molecular weight heparin cannot bind to thrombin and it remains active.

From: Schafer Al. Low-molecular-weight heparin for venous thromboembolism. Hosp Pract, January 15, 1997, pg. 100.



The Medical Staff of Arkansas Children's Hospital and the University of Arkansas for Medical Sciences Department of Pediatrics is pleased to announce an **expansion of the regional specialty clinic program in Northwest Arkansas.**

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Information provided by the Arkansas Department of Health, Division of Epidemiology

Meningococcal Disease in Arkansas

Meningococcal infections appear both as meningitis and meningococcemia, and are a continuing serious health problem in Arkansas. In 1996, 34 cases and six deaths were reported in the state. This compares with the 1992-1996 annual average of 35 cases and 4 fatalities. (See Table 1.) The 5-year fatality rate for Arkansas' cases was 13% for all meningococcal infections reported, compared to CDC's reported case fatality rate of 13% for meningitis and 11.5% for meningococcemia.

Serogroup B organisms predominate, causing 46% (US) and 42% (Arkansas) of cases. Serogroup C isolates are next in frequency, causing 45% (US) and 35% (Arkansas). Other serogroups -- A, Y, and W-135 -- are less often isolated.

Reports from the CDC indicate that the meningococcus has replaced *Haemophilus influenzae* type B (Hib) as the leading cause of meningitis in children, due to effectiveness and increasing use of recently introduced vaccines for Hib. The national picture is mirrored by Arkansas' figures, which show a corresponding decrease in Hib meningitis since 1990. (Figures 1 and 2.) A disproportionate number of cases (32%, 57 of 178) of Arkansas' cases occurred in children under two years of age during 1992-1996. This age group also recorded 35% of deaths caused by meningococcal disease (8 of 23) in that period. Overall, the age of cases ranged from one month to 91 years. Meningococcal disease occurs most frequently in late winter and spring.

Recent publication of guidelines for the control and prevention of meningococcal disease by the Advisory Committee on Immunization Practices (ACIP) will assist physicians and public health personnel in coping with the expected spring increase in the incidence of this disease. These guidelines were published by the CDC in the MMWR February 14, 1997 / Vol 46 / No. RR-5, entitled Control and Prevention of Meningococcal Disease and Control and Prevention of Serogroup C Meningococcal Disease: Evaluation and Management of Suspected Outbreaks. These guidelines have been excerpted for this article.

Control of meningococcal disease is accomplished primarily by antimicrobial prophylaxis of close contacts of case patients. Close contacts include a) household members, b) day care center contacts, and c) anyone directly exposed to the patient's oral secretions. This would include kissing, mouth-to mouth resuscitation, endotracheal intubation, or endotracheal tube management. Household contacts have an attack rate estimated to be four cases per 1,000 cases exposed, which is 500-800 times greater than for the total popu-

lation. The rate of secondary disease is highest in the first few days after onset of disease in the primary patient. Prophylaxis should be administered as soon as possible after the exposure is identified but, if prophylaxis is delayed for 14 days or more, it is probably of limited or no value.

Currently, three antimicrobials are recommended for prophylaxis: rifampin, ciprofloxacin, and ceftriaxone. Rifampin should not be used in pregnant women, because the drug is teratogenic in laboratory animals. Rifampin changes the color of urine to reddish-orange and is excreted in tears and other body fluids; it may cause permanent discoloration of soft contact lenses. Because the reliability of oral contraceptives may be affected by rifampin therapy, consideration should be given to using alternate contraceptive measures while rifampin is being administered.

Ciprofloxacin is not generally recommended for persons <18 years of age or for pregnant and lactating women because the drug causes cartilage damage in immature laboratory animals. However, a recent international consensus report has concluded that ciprofloxacin can be used for chemoprophylaxis when no acceptable alternative therapy is available.

Systemic antimicrobial therapy of meningococcal disease with agents other than ceftriaxone or other third-generation cephalosporins may not reliably eradicate nasopharyngeal carriage of *Neisseria meningitidis*. If other agents have been used for treatment, the index patient should receive chemoprophylactic antibiotics for eradication of nasopharyngeal carriage before being discharged from the hospital.

N. meningitidis is the leading cause of bacterial meningitis in older children and young adults in the United States. The quadrivalent A, C, Y, and W-135 meningococcal vaccine available in the United States is recommended for control of serogroup C meningococcal disease outbreaks and for use among certain high-risk groups, including a) persons who have terminal complement deficiencies, b) persons who have anatomic or functional asplenia, and c) laboratory personnel who routinely are exposed to *N. meningitidis* in solutions that may be aerosolized. Vaccination may also benefit travelers to countries in which disease is hyperendemic or epidemic. Conjugate serogroup A and C meningococcal vaccines are being developed by using methods similar to those used for *H. influenzae* type b conjugate vaccines, and the efficacies of several experimental serogroup B meningococcal vaccines have been documented in older children and young adults.

Culture confirmation and serogrouping is available at the Arkansas State Health Department Microbiology Laboratory. Whenever possible, isolates from cerebrospinal fluid or blood cultures of patients with suspected meningococcal disease should be referred, both for the purpose of surveillance as well as possible outbreak identification.

Table 1 Meningococcal case characteristics, by year Arkansas, 1992-1996							
Cases	1992	1993	1994	1995	1996	Total	Mean or % 35 (M)
Group							
A	0	0	1	0	0	1	1%
B	4	0	13	13	13	43	42%
C	0	4	14	11	7	36	35%
Y	3	1	5	7	4	19	19%
Non-typable	0	0	0	1	1	2	2%
Under 2 yr	9	7	11	14	16	57	39%
Sex							
M	18	14	19	15	16	82	47%
F	4	13	35	25	18	94	53%
Race							
B	1	3	6	3	6	21	11%
W	22	24	48	32	28	174	89%
Deaths	6	4	4	3	6	23	13%

Meningitis, Meningococcal vs H. influenzae

US, 1990-1996

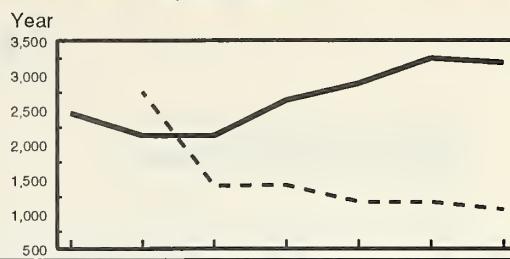


Figure 1

US 1996 totals are provisional

Meningitis, Meningococcal vs. H. influenzae

Arkansas, 1990-1996

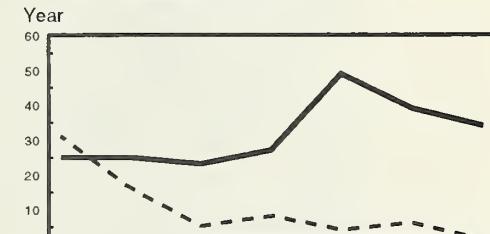


Figure 2

Reported Cases of Selected Diseases in Arkansas Profile for January 1997

Selected Reportable Diseases	Total Reported Cases Jan. 1997	Total Reported Cases Jan. 1996	Total Reported Cases 1996	Total Reported Cases 1995
Campylobacteriosis	15	13	241	153
Giardiasis	14	12	183	131
Shigellosis	19	6	176	176
Salmonellosis	13	21	454	332
Hepatitis A	27	67	507	663
Hepatitis B	3	11	91	83
HIB	0	0	0	6
Meningococcal Infections	2	6	34	39
Viral Meningitis	2	4	38	31
Lyme Disease	0	0	27	11
Rocky Mountain Spotted Fever	0	0	23	31
Tularemia	0	0	20	22
Measles	0	0	0	2
Mumps	0	0	1	5
Gonorrhea	351	448	5050	5437
Syphilis	23	65	706	1017
Legionellosis	0	0	1	5
Pertussis	3	1	16	59
Tuberculosis	0	3	225	271

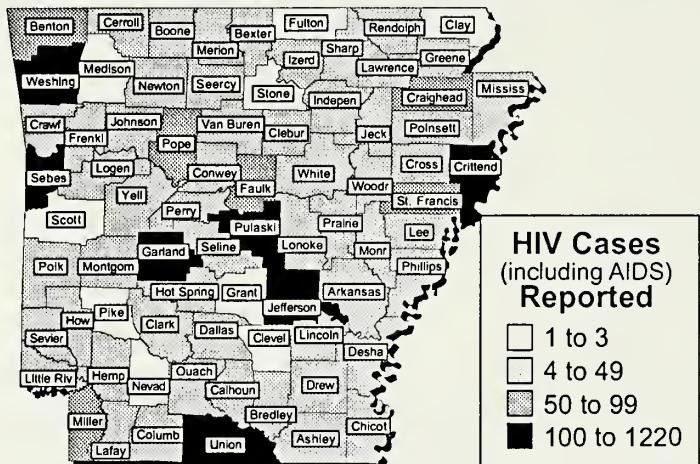
The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table reflect the actual disease onset date, if known, rather than the date the disease was reported.

For a listing of reportable diseases in Arkansas, call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893.

Arkansas HIV/AIDS Report 1983-1997

Distribution Of Cases

1983 through February 12, 1997



Arkansas Department of Health HIV/AIDS Surveillance Program

Demographics		83-89	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
S E X		Male	510	367	376	374	339	346	323	266	57	2,958
	Female	64	67	87	76	89	89	89	78	20	659	18
A G E	Under 5	4	8	13	6	3	7	2	1	6	50	1
	5-12	2	5	1	2	1	0	1	0	0	12	0
	13-19	15	14	18	25	11	21	11	21	4	140	4
	20-24	94	61	43	48	59	58	44	29	7	443	12
	25-29	144	105	100	99	106	80	73	60	8	775	21
	30-34	128	105	114	106	89	93	97	84	14	830	23
	35-39	91	70	86	63	75	69	80	70	15	619	17
	40-44	43	38	47	39	45	48	46	35	9	350	10
	45-49	29	12	19	25	16	27	22	18	9	177	5
	50-54	8	7	14	14	10	10	17	14	1	95	3
	55-59	7	6	3	12	6	6	6	6	3	55	2
	60-64	2	1	2	6	5	9	7	1	1	34	1
	65 and older	7	2	3	5	2	7	6	5	0	37	1
R A C E	White	385	290	280	280	264	244	253	187	35	2,218	61
	Black	185	141	180	164	159	180	150	145	37	1,341	37
	Hispanic	2	0	3	4	1	7	3	6	0	26	1
	Other/Unknown	2	3	0	2	4	4	6	6	5	32	1
R I S K	Male/Male Sex Injection Drug User (IDU)	327	229	239	246	231	211	164	127	15	1,789	49
	Male/Male Sex + IDU	77	65	89	71	62	71	54	27	7	523	14
	Heterosexual (Known Risk)	77	37	32	37	28	23	28	22	1	285	8
	Transfusion	53	56	66	65	96	97	63	57	6	559	15
	Perinatal	16	6	8	10	1	2	3	1	0	47	1
	Hemophiliac	4	8	13	8	4	7	3	1	5	53	1
	Undetermined	6	18	5	6	2	3	5	0	0	45	1
TOTAL		574	434	463	450	428	435	412	344	77	3,617	100

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

HIV Cases By County

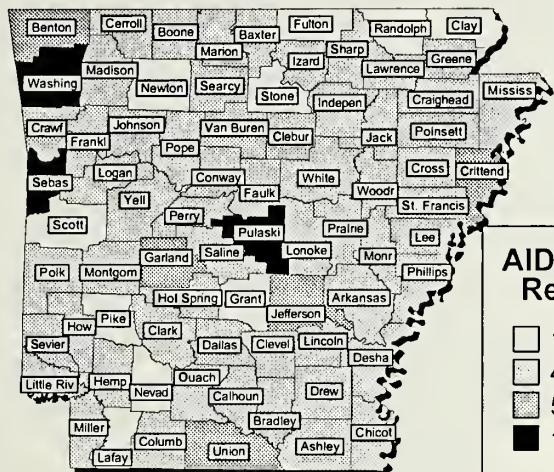
County	1983- 2/12/97	Mar. 96- Feb. 97
Arkansas	17	4
Ashley	19	*
Baxter	27	*
Benton	87	5
Boone	28	*
Bradley	15	*
Calhoun	7	0
Carroll	38	*
Chicot	17	0
Clark	15	7
Clay	*	*
Cleburne	13	*
Cleveland	*	0
Columbia	20	*
Conway	20	*
Craighead	62	6
Crawford	33	*
Crittenden	154	20
Cross	20	*
Dallas	8	*
Deshaw	17	4
Drew	12	*
Faulkner	62	*
Franklin	5	0
Fulton	*	*
Garland	133	12
Grant	*	0
Greene	22	4
Hempstead	20	*
Hot Spring	22	0
Howard	9	*
Independence	28	0
Izard	6	0
Jackson	7	*
Jefferson	160	23
Johnson	11	0
Lafayette	6	0
Lawrence	12	*
Lee	12	*
Lincoln	4	0
Little River	11	*
Logan	5	*
Lonoke	24	*
Madison	*	0
Marion	4	0
Miller	86	5
Mississippi	42	6
Monroe	13	*
Montgomery	6	0
Nevada	*	*
Newton	5	*
Ouachita	31	*
Perry	5	0
Phillips	34	4
Pike	*	0
Poinsett	15	*
Polk	12	*
Pope	54	*
Prairie	6	0
Pulaski	1220	94
Randolph	5	*
St. Francis	72	11
Saline	24	*
Scott	*	0
Searcy	4	*
Sebastian	202	5
Sevier	10	*
Sharp	10	*
Stone	*	*
Union	115	15
Van Buren	5	0
Washington	276	33
White	34	6
Woodruff	4	0
Yell	11	*
Prisons	96	12

- Case numbers of 1-3 are not reported.

Arkansas HIV/AIDS Report

1983-1997

Distribution Of Cases 1983 through February 12, 1997



Arkansas Department of Health HIV/AIDS Surveillance Program

Demographics		83-89	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
S E X	Male	231	162	171	243	325	253	238	212	29	1,864	86
	Female	21	19	25	34	63	42	35	54	9	302	14
A G E	Under 5	2	6	6	3	2	1	2	0	6	28	1
	5-12	1	1	1	0	1	0	2	0	0	6	0
	13-19	0	4	3	2	4	3	1	3	1	21	1
	20-24	23	10	14	14	31	22	11	14	2	141	7
	25-29	58	41	42	65	78	45	46	46	4	425	20
	30-34	62	44	42	70	95	80	75	75	7	550	25
	35-39	53	32	37	55	77	52	49	54	9	418	19
	40-44	21	18	33	27	48	40	35	37	3	262	12
	45-49	12	14	6	22	26	22	17	21	3	143	7
	50-54	4	5	5	7	10	12	15	4	1	63	3
	55-59	8	1	4	8	8	5	6	7	1	48	2
	60-64	3	1	1	2	5	10	5	1	0	28	1
	65 and older	5	4	2	2	3	3	9	4	1	33	2
R A C E	White	192	133	132	200	264	189	174	144	21	1,449	67
	Black	57	46	63	73	120	103	96	116	16	690	32
	Hispanic	1	0	1	3	3	2	3	4	0	17	1
	Other/Unknown	2	2	0	1	0	1	0	2	1	9	0
R I S K	Male/Male Sex Injection Drug User (IDU)	142	112	114	175	229	162	136	117	11	1,198	55
	Male/Male Sex + IDU	27	17	29	41	67	47	47	26	2	303	14
	Heterosexual (Known Risk)	49	19	21	27	29	25	24	22	1	217	10
	Transfusion	15	10	11	20	52	41	34	52	4	239	11
	Perinatal	13	7	8	6	1	4	3	2	0	44	2
	Hemophiliac	2	6	6	3	3	1	3	0	5	29	1
	Undetermined	2	5	5	4	5	6	7	1	0	35	2
	TOTAL	252	181	196	277	388	295	273	266	38	2,166	100

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS Cases By County

County	1983- 2/12/97	Mar. 96- Feb. 97	Case Rate Per 100,000
Arkansas	9	0	0.0
Ashley	15	*	4.1
Baxter	22	0	0.0
Benton	70	7	7.2
Boone	22	*	10.6
Bradley	11	*	17.0
Calhoun	6	*	17.2
Carroll	23	0	0.0
Chicot	10	*	12.7
Clark	10	*	14.0
Clay	*	*	5.5
Cleburne	7	0	0.0
Cleveland	4	0	0.0
Columbia	15	*	7.8
Conway	14	0	0.0
Craighead	44	4	5.8
Crawford	26	*	2.4
Crittenden	77	14	28.0
Cross	10	*	15.6
Dallas	5	*	10.4
Desho	8	*	6.0
Drew	7	*	5.8
Faulkner	47	6	10.0
Franklin	4	0	0.0
Fulton	*	0	0.0
Garland	81	14	19.1
Grant	*	*	7.2
Greene	12	*	9.4
Hempstead	11	*	9.3
Hot Spring	16	*	7.7
Howard	6	0	0.0
Independence	15	0	0.0
Izard	5	*	8.8
Jackson	4	0	0.0
Jefferson	87	16	18.7
Johnson	7	0	0.0
Lafayette	*	0	0.0
Lawrence	11	*	5.7
Lee	7	0	0.0
Lincoln	4	0	0.0
Little River	5	0	0.0
Logan	6	*	4.9
Lonoke	22	*	2.5
Madison	4	0	0.0
Marion	4	0	0.0
Miller	46	6	15.6
Mississippi	16	4	7.0
Monroe	6	*	8.8
Montgomery	5	0	0.0
Nevada	*	*	9.9
Newton	*	0	0.0
Ouachita	21	*	3.3
Perry	4	0	0.0
Phillips	19	4	13.9
Pike	*	0	0.0
Poinsett	8	*	4.1
Polk	9	*	5.8
Pope	26	*	2.2
Prairie	5	0	0.0
Pulaski	716	81	23.2
Randolph	*	*	6.0
St. Francis	33	8	28.1
Saline	17	*	3.1
Scott	*	0	0.0
Searcy	4	*	12.8
Sebastian	122	6	6.0
Sevier	8	*	7.3
Sharp	8	*	21.3
Stone	*	0	0.0
Union	67	10	21.4
Van Buren	4	0	0.0
Washington	167	22	19.4
White	18	*	3.7
Woodruff	4	0	0.0
Yell	8	*	11.3
Prisons	31	7	N/A

* Case numbers of 1-3 are not reported.

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Kleinschmidt, Kevin C., Family Practice. Medical Education, Southwestern Medical School, Dallas, Texas, 1984. Internship/Residency, Wichita Falls Family Practice Residency, 1985/1987. Board certified.

CAMDEN

Feld, Sheldon Michael, Family Practice. Medical Education, Queen's University, Kingston, Ontario, Canada, 1970. Internship, Scarborough General Hospital, 1971.

CHEROKEE VILLAGE

Kleinschmidt, Kevin C., Family Practice. Medical Education, Southwestern Medical School, Dallas, Texas, 1984. Internship/Residency, Wichita Falls Family Practice Residency, 1985/1987. Board certified.

Gupta, Atul, Pediatrics. Medical Education, All India Institute of Medical Science, India, 1989. Residencies, All India Institute of Medical Sciences, 1994, and Rush Presbyterian St. Lukes Medical Center, Chicago, Illinois, 1996. Board certified.

FORREST CITY

Salvador, Ester Arejola, Psychiatry. Medical Education, University of Santo Tomas School of Medicine and Surgery, Espana, Manila, Philippines, 1965. Internship, USTH, 1965. Residency, Texas Tech UHSC, Lubbock, Texas, 1996.

FORT SMITH

McCoy, Daniel Wyatt, Cardiothoracic Surgery. Medical Education, Medical College of South Carolina, Charleston. Internship and Residency, University of Mississippi, Jackson, 1990/1994. Residency, University of Tennessee, Memphis, 1996. Board certified.

Queeney, Joseph, Neurological Surgery. Medical Education, Oklahoma State University College of Osteopathic Medicine and Surgery, Tulsa, 1989. Internship, Enid Regional Hospital, 1990. Residency, Doctors Hospital, Columbus, Ohio, 1996. Board certified.

Tait, Amy Simpson, Pediatrics. Medical Education, University of Kansas, Kansas City, 1986. Internship/Residency, Indiana University, 1989. Board certified.

HOT SPRINGS

Grose, Andrew J., Internal Medicine. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995. Board certified.

JACKSONVILLE

Dhaliwal, Harminder Singh, Pediatrics. Medical Education, Government Medical College, Patiala, India, 1976. Internship, Government Medical College, Patiala, India, 1977. Residency, Children's Hospital of Austin, Texas, 1996.

Price, John Gordon, Internal Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996. Board eligible.

JONESBORO

Kelly, Scott Matthew, Emergency Medicine. Medical Education, University of Texas Health Science Center, San Antonio, 1992. Internship, University of Tennessee, Memphis, 1993. Residency, Baptist Hospital, Memphis.

McClurkan, Michael Bruce, Obstetrics/Gynecology. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1996.

LITTLE ROCK

Grissom, James R., Medical Oncology and Hematology. Medical Education, UAMS, 1975. Internship, UAMS, 1976. Residency, Tulane University Medicine Program, New Orleans, 1979. Board certified.

Heard, Adele, Pediatrics. Medical Education, UAMS, 1993. Internship/Residency, Arkansas Children's Hospital, 1994/1996. Board pending.

Ironside, John Brett, Neurology. Medical Education, UAMS, 1992. Internship/Residency, 1993/1996. Board eligible.

Kulik, Steven A., Jr., Orthopedic Surgery. Medical Education, Tulane University, New Orleans, 1984. Internship, U. S. Army, Brooke Army Medical, San Antonio, Texas, 1985. Residency, U.S. Army, William Beaumont Army, El Paso, Texas, 1990. Fellowship, University of Texas, Houston, 1993. Board certified.

Lovett, Angela Robinette, Anesthesiology. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995. Board eligible.

MAYFLOWER

Beasley, Thomas O., Family Practice. Medical Education, UAMS, 1970. Internship, St. Vincent Hospital, 1971. Board certified.

NASHVILLE

Martinazzo-Dunn, Anna, Psychiatry/Child & Adolescent Psychiatry. Medical Education, University of Turin, Italy, 1977. Internship/Residency, Rush Presbyterian St. Luke's Medical Center, Chicago, Illinois, 1983. Fellowship, Institute for Juvenile Research, Chicago, Illinois, 1985. Board certified.

PARAGOULD

Brown, Howard S., Gastroenterology. Medical Education, University of Illinois, Chicago, 1970. Internship/Residency, L.A. County - U.S.C. Medical Center, 1971/1973. Fellowship, Kaiser Foundation Hospital, 1975.

PINE BLUFF

Kremp, Riehard Edward, Radiology. Medical Education, Indiana University School of Medicine, Indianapolis, 1963. Internship, St. Vincent Hospital, 1964. Residency, Vanderbilt University Medical Center, 1972. Board certified.

SEARCY

Sanchez-Montserrat, Rafael, Internal Medicine/Pulmonology. Medical Education, School of Medicine, University of Barcelona, Spain, 1972. Internships, San Juan City Hospital, P.R. Medical Center, 1975. Residency, San Juan VA Hospital, 1977.

SPRINGDALE

Sandler, Richard, Endocrinology. Medical Education, New York University School of Medicine, 1963. Internship/Residency, Bellevue Hospital, 1964/1965. Residencies, Bellevue Hospital, 1965; Harvard, Northwestern University, 1968; and Beth Israel Hospital, Boston, 1969. Board certified.

TILLY

Hollabaugh, Denise Thormahlen, General Practice. Medical Education, Louisiana State University Medical Center, Shreveport, 1986. Internship, E.A. Conway Hospital, Monroe, Louisiana, 1987.

RESIDENTS

Adler, Jodi Lynn, Family Practice. Medical Education, University of Osteopathic Medicine and Health Sciences, Des Moines, Iowa, 1996. Internship/Residency, UAMS.

Albanna, Ahmed Q.S., Neurology. Medical Education, Arabian Gulf University, Bahrain, 1992. Internship, UAMS, 1996. Residency, UAMS.

Chen, Jing Xuan, Anesthesiology. Medical Education, The 4th Military Medical University, Xian, PR China, 1983. Residency, UAMS.

Corder, Fred A., Internal Medicine/Gastroenterology. Medical Education, UAMS, 1994. Internship, UAMS, 1995. Residency/Fellowship, UAMS.

Hajiamiri, Majid, Neurology. Medical Education, Istanbul Medical School, Turkey, 1991. Internship, UAMS, completed. Residency, UAMS.

Henry, Mary Jo, Radiology. Medical Education, University of Tennessee, Memphis, 1994. Residency, UAMS.

Karim, MD, Rezaul, Physical Medicine & Rehabilitation. Medical Education, Mymensingh Medical College, Bangladesh, 1981. Internship, Mymensingh Medical College Hospital, completed. Residency, UAMS.

Kumar, Ashok, Internal Medicine and Hematology/Oncology. Medical Education, Kilpauk Medical College, Madras, India, 1986. Internship/Residency, New Hanover Regional Medical Center, Wilmington, NC. Fellowship, UAMS.

Leek, Grif Alan, Emergency Medicine. Medical Education, Louisiana State University, New Orleans, 1995. Internship/Residency, UAMS.

Malik, Vipin, Internal Medicine. Medical Education, Maulana Azad Medical College, New Delhi, India, 1993. Internship, Maulana Azad Medical College. Residency, UAMS.

McLaughlin, Shannon Gay, Internal Medicine/Geriatrics. Medical Education, UAMS, 1989. Internship/Residency, UAMS, 1990/1992. Fellowship, UAMS.

Minton, Bryan Howard, Family Medicine. Medical Education, UAMS, 1995. Internship, AHEC-NW, Fayetteville, 1996. Residency, AHEC-NW, Fayetteville.

Newton, J. Camp, Anesthesiology. Medical Education, UAMS, 1993. Internship, UAMS, 1994. Residency, UAMS.

Prada, Stefan Alexander, Orthopedic Surgery. Medical Education, Albany Medical College, New York, 1991. Internship, Emory University School of Medicine, Atlanta, Georgia, 1992. Residency, UAMS.

Sadikot, Ruxana T. Medical Education, Grant Medical College, 1988. Internship, UAMS.

Stark, Karen Lynn, Ophthalmology. Medical Education, Washington University, St. Louis, Missouri, 1996. Internship/Residency, UAMS.

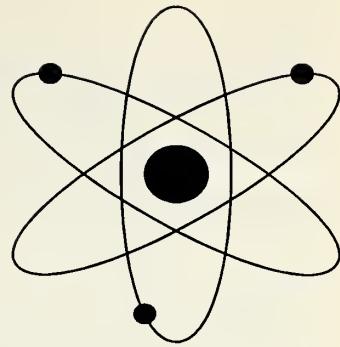
Verbois, Glennal Moore, Physical Medicine & Rehabilitation. Medical Education, Louisiana State University, New Orleans, 1993. Internship/Residency, UAMS.

STUDENTS

Cheryl Lynn Ahart	Jennifer Ann Steeger
Angela Yvonne Anthony	Robert Lloyd Stuckey
Kimberly Ann Booth	Tommy Gene Taylor
Columbus Brown	Jefferson Robert Thurlby
Ryan Paul Buffalo	Sage V. Thurlby
Arlean Michelle Bullard	Felicia A. Watkins-Brown
Mildred Murphy Clifton	Veronica Lynn Williams
Christopher D. Cochran	
Delilah Latrece Easom	
Kimberley Janet Farmer	
Daniel Henry Felton, IV	
Timothy Edward Freyaldenhoven	
Kevin Gaines	
William Cody Grammer	
Janna L. Helmich	
Chris Howell Horan	
Donna-Marie Koroma	
Billy James Layton	
Rebecca Leigh Latch	
Robert Scott Lowery	
Laura Anne Massey	
James R. Maxwell	
Jamie Lynn McGrew	
Gregory Allen McKenzie	
Scott C. Moran	
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Erik C. Parker	
Russell L. Roberts, Jr.	
Lena Jane Rose	
John Preston Scurlock	
Michael Hamilton Sifford	
Jeffrey D. Stamp	

Radiological Case of the Month

Steven R. Nokes, M.D., Editor



Authors

Ronald C. Walker, M.D.

John M. Hayes, M.D.

David W. Bevans, M.D.

Steven R. Nokes, M.D.

History:

A 47 year old white female presented with recurrent hyperparathyroidism. She had a neck exploration 10 months previously, initially successful in controlling her hyperparathyroidism. Prior to re-exploration of her neck, a CT scan of the neck and upper mediastinum was performed (Fig. 1), as well as a Tc-99m Sestamibi scan (Figures 2-4).



Figure 1

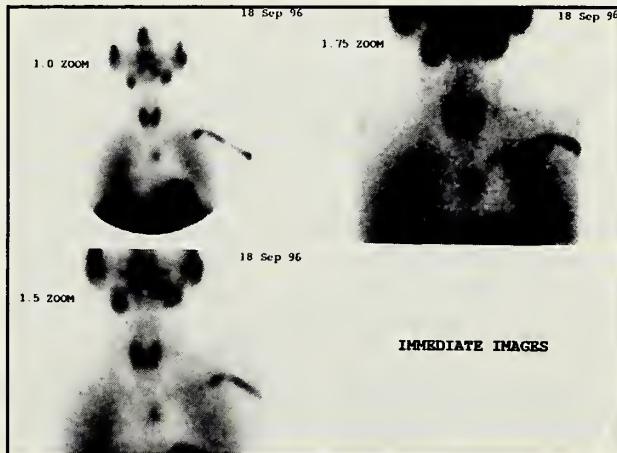


Figure 2

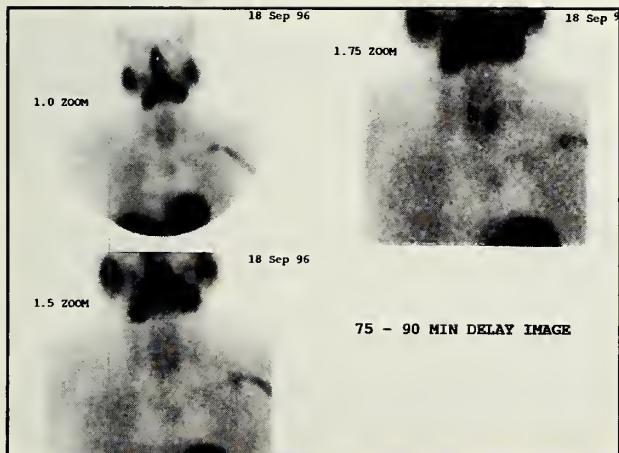


Figure 3

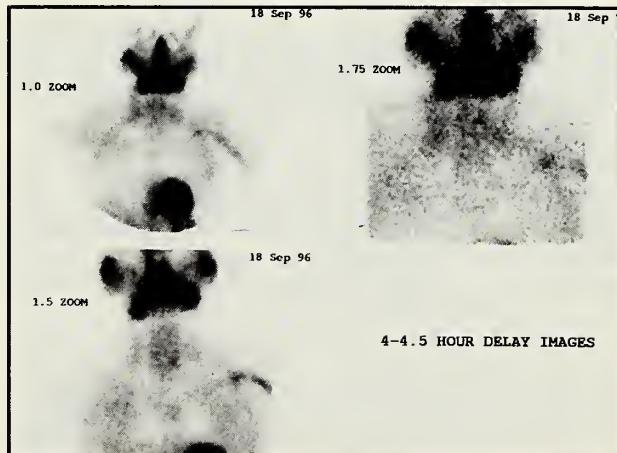


Figure 4

Figures:

Figure 1: CT scan of the upper mediastinum

Figures 2-4: Tc-99m Sestamibi scans

Ectopic parathyroid adenoma of the upper mediastinum

Diagnosis: Ectopic parathyroid adenoma of the upper mediastinum

Findings:

The region of increased uptake of the Tc-99m sestamibi corresponds to the location of the low density mass seen on the CT scan, anterior to the left innominate vein (arrow). This focal region of abnormal activity diminishes over time, in this particular instance at about the same rate of loss of activity in the thyroid. Ectopic thyroid glands could have this appearance, but ectopic thyroid glands do not occur in euthyroid patients with normally located thyroid glands; therefore, this upper mediastinal focal activity is abnormal.

Discussion:

Preoperative localization of parathyroid adenomas is difficult. Most authorities do not feel that preoperative imaging is needed in the vast majority of hyperparathyroid patients who present for their initial exploration. Since preoperative imaging is poor at detecting and localizing parathyroid hyperplasia (as opposed to parathyroid adenomas), an exploration of the neck is indicated regardless of the outcome of the preoperative imaging, in patients with no prior surgical intervention. Ectopic parathyroid adenomas in the mediastinum are rare.

Once a patient has had a neck exploration, a second surgical intervention (as in this case) is a great deal more difficult. Thus, preoperative localization attempts are generally indicated for patients with prior neck exploration.

Tc-99m sestamibi uptake by parathyroid adenomas is poorly understood and variable. The agent generally follows metabolism; hence, it is accumulated in areas of increased cellular metabolic rate (malignancies, cardiac muscle, and adenomas, to name a few). Since sestamibi may clear from the parathyroid adenoma slower, at the same rate as, or more rapidly than the thyroid gland, it is important to image the patient at several time frames to best detect an adenoma. In this case, we found an ectopic parathyroid gland in the upper mediastinum. The patient had the region surgically excised, with the pathologist reporting a cystic parathyroid adenoma. Her hyperparathyroid condition resolved.

Preoperative localization of parathyroid adenomas with Tc-99m sestamibi is a simple and useful technique in the hyperparathyroid patient, particularly with an unsuccessful neck exploration or recurrent disease. The technique is easier to perform and statistically superior to the Tc-99m/Tl-201 dual isotope subtraction study. No imaging technique is, as yet, of significant benefit in patients with parathyroid hyperplasia.

References:

1. Malhotra, A. et. al., Preoperative Parathyroid Localization with Sestamibi. Am J Surg. 1996;172:637-640.
2. Martin, D., Rosen, I.B., Ichise, M. Evaluation of Single Isotope Technetium 99m-Sestamibi in Localization Efficiency for Hyperparathyroidism. Am J Surg. 1996;172:633-636.

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Contributor: David W. Bevans, M.D., is associated with the Pulaski Surgery Clinic.

In Memoriam

Harold Joseph Morris, M.D.

Dr. Harold Joseph Morris of Pine Bluff died Monday, February 17, 1997. He was 82. He is survived by his wife, Molly Malone Morris; daughters, Sarah Johnson of Cincinnati, Ohio, and Judith J. Morris of Bartlett, Tenn.; brother, Sheppard Morris of Memphis; and two grandchildren. A daughter, Linda Frances Morris, died in 1986.



Things To Come

May 1-3

Arkansas Medical Society Annual Session - Scaling New Heights. Arlington Hotel, Hot Springs. For more information, call 1-800-542-1058 or 501-224-8967.

May 8-10

Ambulatory Surgery '97: Sharing Our Experiences FASA 23rd Annual Meeting. Marriott Copley Place Hotel, Boston, MA. For more information, call (703) 836-8808.

May 21-24

National Rural Health Association 20th Annual National Conference: Caring for the country...Partnerships for Health. Westin Hotel, Seattle, Washington. For more information, write to NRHA, One West Armour Boulevard, Suite 301, Kansas City, Missouri, 64111.

June 6-8

Alumni Weekend '97 - University of Arkansas College of Medicine Alumni. Alumni Classes of 1932, 1937, 1942, 1947, 1952, 1957, 1962, 1967, 1972, 1977, 1982 and 1987 will be reuniting this year for a variety of special activities beginning on Friday afternoon, June 6th and ending with a brunch on Sunday, June 8th. All alumni and Caduceus Club members are welcome to attend. Call the Arkansas Caduceus Club at (501) 686-6684 for registration forms and more information.

July 7-10

17th Annual Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by UC Davis School of Medicine and Medical Center, Division of Cardiovascular Medicine and Office of Continuing Medical Education. For more information, call (916) 734-5390.

September 5-7

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

October 26-30

1997 State-of-the-Art Conference: Occupational and Environmental Medicine. Nashville, Tennessee. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (847) 228-6850, ext. 152.

AMS Sponsors Workshops in Little Rock

October 16, 1997

Managed Care Update:

Advanced Strategies for Practice Survival

This workshop will show you how to become more proactive in the managed care marketplace. Numerous case examples will be used to illustrate the following topics: getting into the better plans; tracking managed care plan results; reorganize some of the staff jobs; learn about outcome studies; and determine ways to reduce practice overhead in a reduced-reimbursement environment.

December 4, 1997

Coding Analysis to Maximize Reimbursement in 1997

A hands-on workshop with informative case studies. Major emphasis is on the complex relationship between the procedure, the diagnosis, place of service, provider status and patient financial class for traditional and non-traditional (HMO/PPO) claims processing. Workshop requires a background in the basics of CPT, ICD-9 and the HCFA-1500.

For more information call 501-224-8967

To
those physicians who volunteer
through the Arkansas Health
Care Access Foundation,

Thank You!

As you can see from a sampling of
letters we have received, your
involvement in our program is
appreciated and in many
cases life-saving.

It has been three days since you sent me to the doctor and I have a ways to go to be 100%, but I can breathe and walk across the room now. I had given up hope almost, and I remembered Arkansas Health Care. The doctor gave me two of the medicines I needed and the pharmacy you sent me to filled the antibiotics. Your doctor even "chewed" me out for not coming in two weeks previously. I'm starting to feel good again. God bless you.

I would like to say thank you first of all. Your program made it possible for me to have a mammogram when I had no where else to turn. I did not realize there was such a program. ...it is a much needed program. Thanks again.

For more information on how you can help, call AHCAF at (501) 221-3033 or (800) 950-8233

Western Wildlife
As Easterners moved West, pioneers found animals as exotic as the landscape... buffalo, prairie dogs, bears, beaver, bighorn sheep, cougars, wolves and rattlesnakes. The eagle became a national symbol.

I wanted to thank everyone involved with this program. We had no one else to turn to and we were in desperate need of doctors and medications.

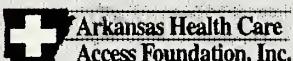
Your program has helped us through a very difficult time.

Due to your generous assistance, I was able to see an eye doctor and no longer fear the loss of my vision. Thank you all for being there.

Arkansas Healthcare Access Foundation

P O Box 56248
Little Rock AR
72215-6248

When I needed medical attention, I was blessed with the knowledge of your program. There were kind and helpful people to guide me.



THANK YOU FOR MAKING THE DIFFERENCE!

Keeping Up

May 30 - June 1

19th Annual Family Practice Intensive Review. Location: UAMS, Education II Building, Little Rock. Program Presenters: Department of Family and Community Medicine. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: Up to 20 hours of CME credit. Fee: TBA. For more information, call 501-661-7962.

October 3 - 5

Primary Care Update (Management of Top 20 Ambulatory Diagnoses). Location: Gaston's Lodge on the White River. Sponsor: Washington Regional Medical Center. For more information, call 501-442-1823 or 1-800-422-0322.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

FAYETTEVILLE-WASHINGTON REGIONAL MEDICAL CENTER

Cardiology Conference, 3rd Wednesday of every month, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided
Chest Conference, 1st Wednesday of every month, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Primary Care Conferences, every Monday, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Tumor Conference, every Thursday, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Breast Conference, 3rd Thursday, 7:00 a.m., J.A. Gilbreath Conference Center, Room #20
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Disorders Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.

Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas

Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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Illustrations should be professionally drawn and/or photographed. Glossy black and white photos are preferred. They should not be mounted and should have the name of the author(s) and figure number penciled lightly on the back. An arrow should indicate the top of the illustration. In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material. Up to four illustrations will be accepted at no charge to the author(s). If more than four are necessary, it is understood that the author(s) will be responsible for the reproduction costs.

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Volume 93 Number 12

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Cover artwork titled "White Water" is by Jonesboro artist Marion Sue Thompson. Artwork made available by the Arkansas Artists Registry, a part of the Arkansas Arts Council, an agency of the Department of Arkansas Heritage.

Medicine in the News

Health Care Access Foundation

As of April 1, 1997, the Arkansas Health Care Access Foundation has provided free medical service to 12,444 medically indigent persons, received 23,649 applications and enrolled 46,075 persons. This program has 1,752 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

History of Medicine Associates Research Award

A History of Medicine Associates Research Award, in the amount of \$1,000, is being offered to an applicant who is interested in preparing a paper on an aspect of the health sciences in Arkansas. Half of the award will be presented when the proposal is accepted and the other half on completion of the paper. The Award is for research in the history of the health sciences in Arkansas on a topic which makes use of the UAMS Library's Special Collections Division in addition to other research collections.

The award may be used at the discretion of the recipient to cover expenses for travel, housing, materials, research or secretarial assistance or other costs directly related to the project.

Upon completion of the paper, the author will receive a certificate in recognition of the award.

A copy of the paper becomes the property of the UAMS Special Collections Division and will be deposited there.

The Associates will assist the author in submitting the paper for publication but publication cannot be assured.

Application Information

The goal of the Award is to encourage research in the history of the health sciences. Applicants are sought not only from the discipline of the health sciences but also from other disciplines, e.g., history, sociology and health administration. The application must include a summary of the paper's topic, a proposed budget, and an anticipated completion date for the paper. The deadline for applications for the award is May of each year. The announcement of the recipient of the award will be made in June. A committee of the History of Medicine Associates will determine the successful applicant. Applications and/or guidelines for application may be requested from: Edwina Walls, Treasurer, History of Medicine Associates, UAMS Library, Slot 586, 4301 W. Markham, Little Rock, AR 72205-7186 or call 501-686-6733.

AIDS Deaths Decline

An ongoing nationwide surveillance system has allowed the Centers for Disease Control to track AIDS incidence, morbidity and mortality since 1981. Now, for the first time in fifteen years, the curves are beginning to change.

In the first six months of 1996, the incidence of AIDS and of AIDS-associated opportunistic infections was comparable to figures from previous years. However, AIDS mortality, which increased steadily through 1994, increased only minimally in 1995 and declined more than 10% during the first six months of 1996.

Deaths declined in all regions of the U.S. and in all racial and ethnic groups, although the decrease was most sizable among non-Hispanic whites (21%) and least among non-Hispanic blacks (2%). Deaths declined 18% among men whose risk for HIV was homosexual sex and 6% among intravenous drug users. Mortality actually increased by 3% in women and people who acquired HIV through heterosexual contact. Overall, these new data add up to a substantial increase in the national prevalence of AIDS, which has risen 10% since 1995 and 65% since 1993.

Comment: These figures echo data from New York City and San Francisco. Many authorities are ascribing declining AIDS mortality to the potent antiretroviral therapy now available, while others cite increased access to medical care. In either case, the figures are clearly cause for both celebration and concern, as the increasing prevalence may soon strain both care and prevention programs. - A Zuger

Update: Trends in AIDS incidence, deaths, and prevalence - United States, 1996. MMWR 1997 Feb 28; 46:165-73.

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CLIA Fact Sheets by Fax Program Expanded by COLA and CDC

Five new Fact Sheets on CLIA regulations relating to Proficiency Testing are immediately available free of charge via same-day fax to physicians and their staffs, because of an expansion of a cooperative agreement between COLA and the Centers for Disease Control and Prevention (CDC). The Fact Sheets are available through COLA's Customer Service Center at 800-298-8044.

"The response to the CLIA Fact Sheets by Fax program has been phenomenal," says Douglas A. Beigel, COLA's Chief Operating Officer. "There have been over 12,000 requests for the CLIA Fact Sheets by

healthcare professionals. Extending our cooperative agreement with the CDC has enabled us to develop a series of CLIA Fact Sheets on proficiency testing which meets a strong need to provide brief, but comprehensive information on this topic," Beigel says.

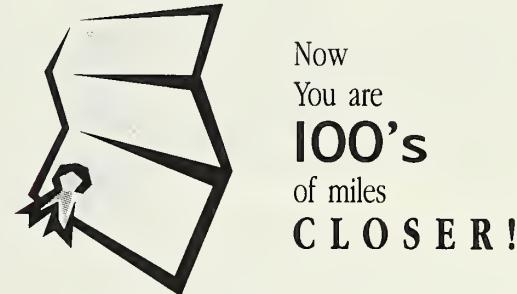
Initiated in 1995, the cooperative agreement between COLA and the CDC focuses on developing educational information to benefit physicians with office laboratories. Prior to the new Proficiency Testing Fact Sheets, COLA conducted an Educational Training Needs Assessment of physician office laboratories and produced a series of Fact Sheets on complying with the Clinical Laboratory Improvement Amendments.

The single topic CLIA Fact Sheets condense information from a variety of voluminous sources, such as the Federal Register and laboratory manuals, into user friendly, one and two page formats. There are 41 Fact Sheets covering such topics as Quality Assurance, Quality Control, OSHA, personnel standards as well as Proficiency Testing. The complete list includes:

1. How to Register Your Laboratory for CLIA Purposes
2. How to Find Out More About Your Laboratory's State Licensure Law
3. Seeking Accreditation from a HCFA-Approved Accreditation Program
4. How to Properly Register Your Shared Laboratory with HCFA
5. How to Get a Copy of the CLIA Regulations
6. Requirements for Provider-Performed Microscopy Procedures
7. How to Change Your CLIA Certificate
8. Notification Requirements and Other Responsibilities to HCFA
9. Writing a Procedure Manual
10. Proficiency Testing Information
11. What Every Laboratory Should Know About Documentation
12. Quality Control for Moderate Complexity Testing
13. Quality Control for High Complexity Testing
14. Remedial Actions
15. Quality Control for Microbiology
16. Quality Control for Hematology and Immunohematology
17. Quality Control for Immunology
18. Quality Control for Mycobacteriology, Mycology, and Virology
19. Quality Control Requirements for Blood Gas Analysis and Drug Test Screening
20. A Possible Way to Manage Quantitative Quality Control Results
21. Calibration and Calibration Certification Procedures
22. Safety Standards
23. OSHA Standards for Bloodborne Pathogens
24. Meeting the Personnel Standards for Moderate Complexity Testing

25. Meeting the Personnel Standards for High Complexity Testing
26. Grandfather Provisions for the General Supervisor
27. Responsibilities of the Laboratory Director
28. Grandfather Provisions for the General Supervisor
29. New Pathways to Qualify as the General Supervisor and Testing Personnel for High Complexity Testing
30. Quality Assurance in the Laboratory
31. What to Expect During Your CLIA Inspection
32. How to Respond After Your On-Site Survey
33. CLIA Sanctions and Procedures for Appeal
34. List of CLIA Waived and PPM Tests
35. What to Expect During the Second Cycle Survey
36. HCFA Validation Survey Process
37. Enrolling in Proficiency Testing
38. Regulated Analytes
39. Proficiency Testing Providers
40. Proficiency Testing Paperwork
41. Evaluating Your PT Results

COLA is a non-profit, physician-directed organization whose purpose is to promote quality and excellence in medicine and patient care through a program of voluntary education, achievement and accreditation. COLA was founded by the American Academy of Family Physicians, American Medical Association, American Society of Internal Medicine and the College of American Pathologists.



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Information on COLA's many additional physician and laboratory services, is available by calling COLA at 800-981-9883.

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board Office should be contacted. Therefore, the Board routinely suggests this list be shared with the appropriate supervisory personnel and recruiters in your organization. At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY: March 12, 1997

- *Warren Jean Brown Jackson, LPN 13950 (North Little Rock) Suspension - 2 years, Civil Penalty - \$1,000.00
- *Barbara Rene Rudd Johnson, RN 34675 (Springhill, LA) Suspension - 3 years
- *Cindy Paige Limbaugh, LPN 27878 (Newport) Allowed to renew license followed by probation - 1 year, Civil penalty - \$750.00
- *William Richard Donaldson, RN 36740 (Pocola, OK) Consent agreement, 2 years probation, \$500.00 civil penalty
- *Nancy Carol Sheets, RN 49957 (Hot Springs) Consent agreement, 1 year probation, \$500.00 civil penalty
- *Kimberly Ouanda Bass, RN 50246 (Pine Bluff) Consent agreement, 1 year probation, \$500.00 civil penalty
- *Pamela Lynn Simmons Kuyper, RN 31743 (Arkadelphia) Consent agreement, 1 year probation, \$500.00
- *Donna Ellen Young, RN 29424 (Blytheville) Consent agreement, 1 year probation, \$250.00 civil penalty
- *Christine Johnson, LPN 23873 (Prescott) Consent agreement, 1 year probation, \$500.00 civil penalty

DISCIPLINARY: March 13, 1997

- *Lisa Anne Sullivan Hicks, RN 24568 (Little Rock) License reinstated followed by revocation
- *Rita Faye Cook Newman, RN 32513 (Hot Springs) Suspension - 5 years
- *Linda Jo Hankins Robinson, LPN 9209 (Rison) Sus-

pension - 5 years

*Angela Yvette Jones Prater, LPN 30640 (Prescott) Probation - 1 year, civil penalty, \$500.00

VOLUNTARY SURRENDER:

- *Brenda Ann Garner Cranford, RN 34749 (Ashdown)
- *Cayce Jonette Asher-Griggs, LPN 31950 (Prairie Grove)
- *Emiley Anne Hilton Weedman, RN 25326 (El Dorado)

LETTERS OF REPRIMAND:

- *Twanna Jean DeArmond Channer, LPN 35022 (Pocahontas)
- *Hazel Louise Green Webb, LPN 18194 (Montrose)
- *Vicki Sue Phillips Rhodes Holloway, LPN 34132 (Paragould)



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AMS Newsmakers

Dr. Donald B. Baker, a retired Fayetteville family practitioner, is one of four recipients of the Washington Regional Medical Foundation's 1997 Eagle Award for outstanding health leadership. This prestigious award recognizes individuals and organizations that have improved health care in Northwest Arkansas. Former U.S. Sen. David Pryor, Ellen Meenen and the St. Francis House Clinic were the other award winners.

Dr. Jerry Hodges, a family practice physician in Dardanelle, was recently elected president of the Yell County Medical Society at the organization's annual meeting.

Dr. Kevin Marty Hurlbut, a physician of physical medicine and rehabilitation in Fayetteville, was recognized recently by Northwest Arkansas Rehabilitation Hospital - where he is medical director - for his leadership and dedication to the facility.



F. Hampton Roy, M.D.

Dr. F. Hampton Roy, of Little Rock, has been elected president of the American College of Eye Surgeons. As president, he will direct the organization's activities, including education programs related to quality control in ophthalmology.

Dr. Dwight Williams, a Paragould family practitioner, has been reappointed by Gov. Mike Huckabee to a three-year term on the state Board of Health. His term will expire December 31, 2000.

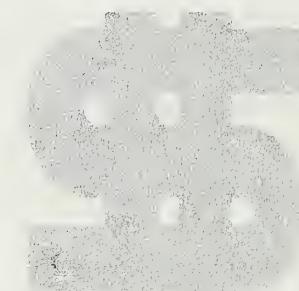
The AMA Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients are as follows: *For the month of December*: Charles Watson Craft, Greenwood; Jimmie John Magie, Conway; Shamim A. Malik, Pine Bluff; Michael Richard Platt, Gravette; and Victor Alan Rozeboom, Harrison. *For the month of January*: Charles Marion Boyd, Little Rock; Jerry Chalmas Chapman, Cabot; John Sidney Elkins, Arkadelphia; Robert Lynn Fincher, Little Rock; and David John Marzewski, Newport. *For the month of February*: Donald Landers Cohagan, Bentonville; James Toliver Crider, Harrison; Theophilus A. Feild, Fort Smith; David Fried, Mena; Robert E. Holder, Bentonville; Don Gene Howard, Fordyce; Gary

Michael Petrus, North Little Rock; Rheeta Minon Stecker, Hot Springs National Park; Amy Simpson Tait, Fort Smith; James Ray Weber, Jacksonville; and Morton C. Wilson, Fort Smith. *For the month of March*: David L. Baker, Conway; Roger Earl Cagle, Paragould; Wayne Patrick Enns, Paris; Ziad Eskandar, Jonesboro; Stephen Allen Hathcock, Little Rock; Connie Hiers, Jonesboro; Kevin Martin Hurlbut, Fayetteville; Dale E. Johnston, Little Rock; Robert Lee Kerr, Mountain Home; Hosea W. McAdoo, Little Rock; Elvin Lloyd Norris, Beebe; Norton Allen Pope, Little Rock; F. Hampton Roy, Little Rock; Hoy Barksdale Speer, Stuttgart; and Joe Mitchell Tullis, Mountain Home.

Send your accomplishments and photo for consideration in *AMS Newsmakers* to:
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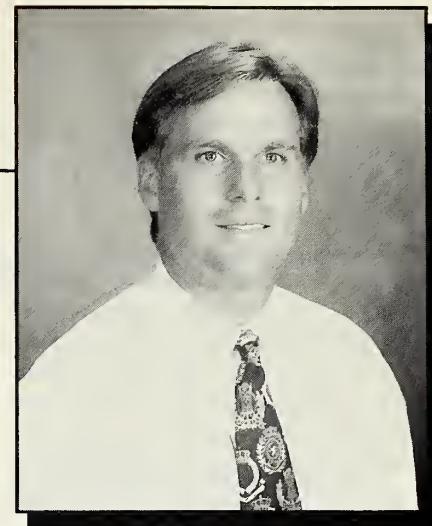
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Little Rock * Conway * Jonesboro
Helena * Paragould
Blytheville * West Memphis

New Member Profile



George T. Gray, III, M.D.



PROFESSIONAL INFORMATION

Specialty: General Practitioner

Years in Practice: Ten years

Office: Conway

Medical School: Oklahoma State University College of Osteopathic Medicine, Tulsa, 1985

Internship: Harborside Hospital, St. Petersburg, Florida, 1986

Volunteer work: Lectures at the University of Central Arkansas and football physicals for Conway Public Schools

Honors/Awards: President of the Arkansas Osteopathic Medical Association

PERSONAL INFORMATION

Date/Place of Birth: July 4, 1958, in Conway

Children: Daughter, Ali, ten years old and Son, Tyler, eight years old

Hobbies: Running and horseback riding

THOUGHTS & OTHER INFORMATION

If I had a different job, I'd be: A triathlete

Best Habit: Exercising

Favorite junk food: Sweet tarts

Most valued material possession: My dogs, Wilbur and Abby

People who knew me in medical school, thought I was: Conceited

The turning point of my life was when: I became a father

Favorite vacation spot: Hawaii

One goal I haven't achieved, yet: Becoming a millionaire

One goal I am proud to have reached: Having two wonderful children

When I was a child, I wanted to grow up to be: A doctor

One of my pet peeves: Nagging

First job: Mowing lawns

Worst job: Welding

One word to sum me up: Compulsive

My philosophy on life: If you don't reach for it, you will never have it.

If you would like to appear in *New Member Profile* or *Member Profile*, contact Tina Wade at AMS at (501) 224-8967 or 1-800-542-1058.

The Patient-Physician Relationship: Covenant or Contract?

James T.C. Li, M.D., Ph.D.

Many physicians are acutely aware of the external forces that are threatening the medical profession. Most of these forces are direct results of attempts to control healthcare costs.

Although medical information science, quality improvement, and practice guidelines all have the potential to improve the quality of medical care, in practice, cost-containment strategies often ultimately degrade the patient-physician relationship. In some managed-care settings, the clinical encounter is deliberately "managed"; thus, the physician's interests are at odds with the patient's interests. Central to this notion is the destruction of the traditional patient-physician relationship in which the interests of the patients come first. For example, in some managed-care organizations, physicians are required to sign a loyalty oath and gag order. The loyalty is to the managed-care organization, and the gag order is for patients. These orders prohibit or limit clinically meaningful discussion with patients. When these rules are coupled with payment schemes that reimburse physicians to limit care, they dramatically undermine the trust between the patient and the physician.

Managed-care organizations should not be blamed for these cost-containment measures. After all, the directors of a for-profit corporation have a fiduciary duty to put the interests of shareholders over their own interests and the interests of their employees. The fiduciary relationship, between director and shareholder or between a trustee and a beneficiary, is held to extremely high ethical standards. Executives in managed-care corporations should not be criticized for putting the needs of their stockholders first. In fact, this fiduciary relationship should be supported and honored.

Physicians, however, should be faulted for submitting to external pressures and for betraying the trust granted to them by their patients. The relationship between the patient and the physician is based on the expectation that the physician will put the needs of

the patient first - over and beyond the interests of the physician or any third party. This relationship is the foundation on which the practice of medicine is built and dates back to the era of Hippocrates and Asklepios in ancient Greece (1,500 B.C. to 500 B.C.).¹ The relationship between patient and physician should be held to a standard at least as high as the fiduciary relationship between director and shareholder.

Misplaced Priorities of Physicians.-Physicians have not always upheld their responsibility to put the needs of the patient first. The well-being of patients and the profession of medicine have suffered when physicians have put their own interests or the interests of a third party before the interests of their patients. Greed, prestige, and power have all succeeded at some time in displacing patients as the top priority of physicians. These lessons from history are relevant today.

When the pursuit of wealth or money becomes the first priority of physicians in a fee-for-service environment, patients may be subjected to unnecessary diagnostic tests or therapeutic interventions. In a capitated payment environment, concern about the protection of the physician's own livelihood can lead to withholding clinically needed care.

When the pursuit of fame or prestige becomes the first priority of physician-investigators, patients may undergo dangerous and life-threatening experimentation. The single-minded goal of scientific achievement, even without the temptations of fame or prestige, can be an equally false priority of physician-investigators. The history of medical research during the current century is riddled with examples of scientific misconduct and ethical lapses. The infamous Tuskegee syphilis study is but one example.

Patients, the medical profession, and society all suffer when the interests of a third party become the first priority of physicians. The third party can be the physician's employer, a political party, or the government. For example, physicians in the United States have done harmful experiments with radiation and toxic chemicals on unsuspecting persons for the benefit of the government.

Extreme Incident of Physician Abuse of Power.-The

* Dr. Li is with the Division of Allergy/Outpatient, Infectious Diseases and Internal Medicine, at Mayo Clinic Rochester, in Rochester, Minnesota.

most horrific example of physicians' abandonment of patients is the central role of physicians in the Third Reich; after 1933 in Germany and 1938 in Austria, half of all physicians were members of the Nazi party.² Many of these physicians, often prominent in the academic community, were also leaders and perpetrators of eugenics, euthanasia, and mass murder programs; recall the image of the physician acting as gatekeeper and triage officer at the concentration camps. Although some physicians cried out against the pogroms, many were silent. Others capitalized on employment opportunities made available by the disappearance of Jewish physicians.³

Lessons for Today's Physicians.-Although no parallel exists between physicians' behavior in the Third Reich and physicians' behavior today, important lessons can be learned by contemporary physicians. Dr. Jordan J. Cohen discussed the conference entitled "Hippocrates Betrayed: Medicine in the Third Reich" held on the 50th anniversary of the Nuremberg Doctor's Trial.⁴ The conference "explored the antecedents of the contemporary relationship between physicians and the state through an historical analysis of the roots of Nazi medicine...." He declared that medicine can survive and flourish only if physicians exercise constant vigilance to ensure that medical science is used only for service to humanity. This vigilance must include resistance to the temptations of wealth, prestige, and power. Some of the excesses previously described may not have occurred if physicians had remembered their obligation to put patients first and if they had had the courage and strength to act on this principle.

Self-Examination.-In the spirit of such vigilance, I suggest that each physician examine his actions by addressing three questions.

1. *Are you a caregiver or a gatekeeper?* The caregiver provides care and concern to a person in need, healing if possible, helping always. To sick persons, the caregiver is "a guide through some of life's most difficult journeys."⁵ In contrast, the gatekeeper minds the gate, letting some persons through and keeping others out. The function of the gate is to restrict access. The gatekeeper serves the interests of the owner of the gate not of the people trying to get through the gate. Physicians are just beginning to realize that the gatekeeper serves entirely at the whim of the owner of the gate.

2. *Which principle governs your relationship with the patient: Morality or the marketplace?* The term "morality" refers to the basic human concept of right and wrong. For physicians, morality means doing what is right for our patients and speaking or acting out against what is wrong. No such moral absolute can be found in the marketplace. The market is driven by revenue, profit margins, and market share. No patients exist in a market-driven practice of medicine - only consumers for whom the watchword is *caveat emptor*.

A great danger to the practice of medicine is the

transformation of physicians to interchangeable, dispensable workers accountable only to their employers and the financial performance of the institution that employs them. In this setting, physicians and health care are simply commodities - cold and without compassion. The greatest danger, however, is not loss of the physician's autonomy, degradation of the profession of medicine, or transformation of health care to a commodity. The greatest danger is the transformation of the patient to the status of commodity. The lessons from history are particularly instructive on this point.

In the Hippocratic model of medicine, the patient represents a vulnerable person in need - the first and only priority of the physician. In the commercial model of medicine, the patient is at best a consumer: at worst, the patient is a source of revenue when well and a source of medical (financial) losses when sick. In a capitated, commercial system, physicians and managed-care organizations have every financial reason to shun sick people. In this system, physicians make economic (not clinical) decisions and provide medical explanations for those decisions. Patients are left to fend for themselves and to face the consequences alone.

3. *What is the relationship between you and your patient?* Is it a covenant or a contract? A group of clinical ethicists defined the practice of medicine as "a moral enterprise grounded in a covenant of trust."⁶ Webster's Ninth New Collegiate Dictionary defines covenant as a "formal, solemn, and binding agreement." For a more complete understanding of the term "covenant," we must return to our professional ancestors in ancient Greece. During the time of Hippocrates, the Greek term for covenant (*diatheke*) was not used to describe a usual agreement or contract between two parties. The term "*diatheke*" was used almost exclusively to signify a very special relationship - a will and testament.

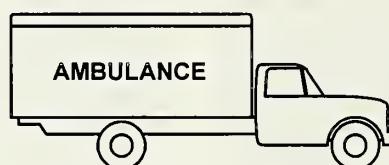
A last will and testament involves parties who have a special and close relationship with each other; a contract involves strangers. A last will and testament is based on trust; a contract is based on mistrust. A last will and testament is a relationship between two unequal parties in which one party is concerned about the welfare of the other. A contract is between two equal parties, each concerned only with his own welfare. In its essence, a will and testament is a beneficent promise, a trust offered by one party to another. For physicians, this promise is to put the interests and needs of the patient first. The term "covenant" aptly describes the relationship between patient and physician. Physicians should have the conviction and courage to defend this covenant not only against external threats but also against internal threats of fear, ignorance, and complacency.

Address reprint and reference requests to Dr. J. T. C. Li, Division of Allergy, Mayo Clinic Rochester, 200 First Street SW, Rochester, MN 55905.

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INVESTMENT ADVICE Who Do You Call?

Larry Waschka

When I was growing up in a small town in Arkansas, everyone knew where the local doctors lived because their houses were always the biggest and nicest. Back then, if you were a doctor, you were almost guaranteed a wealthy lifestyle. But now things have changed. A study done in 1994 showed that the average yearly income for a physician in private practice was \$218,000. That may seem high to some people, but relative to the corporate CEO, it seems quite low. The average total compensation of America's 100 highest paid CEOs was \$3,554,000 which included bonuses and stock options. This is 190 times the average American worker's income.

With the advent of HMO's and other sweeping changes in the medical field, a physician's income no longer means that financial security is guaranteed. I have many clients who are physicians, and I hear their fears about declining salaries and what the future holds. One physician in particular made a very good analogy. He had performed a lot of financial calculations for his practice and said that he had to work Monday, Tuesday, and Wednesday of every week just to cover his overhead. The remaining two days he made a profit. His point was that if he took a day off during the week, he lost half of his profit. Taking off one day or even just an afternoon was a weekly "catch 22."

He wants to retire comfortably, but, with less control over his profitability, he's left with only a handful

of things he can do. He could reduce his expenses and save more, but that's easier said than done. The net result is that he came to me looking for answers. His primary concern became portfolio return--he thought, if I can't control the profitability of my practice, why not work on the performance of my portfolio.

Now, more than ever, you must be a good money manager in order to have a secure retirement. A secure financial retirement consists primarily of a portfolio large enough to produce an income stream sufficient to cover your living expenses and other additional expenditures for such things as travel.

How much is enough? Let's take a basic example. Assume that you want an annual after tax income of \$100,000 at age 65. If you assume a 40% tax bracket, that figure becomes \$166,666 before tax.

If you were able to get a 10% return on your portfolio, your portfolio would have to be worth at least \$1,666,666 just to cover your income.

However, if you were able to get a 13% return, you would only need \$1,282,046 in your portfolio. That's a difference of \$384,620 which is a lot of money. This just reminds us how very important portfolio return is at this stage of the game.

Let's look at this another way. At the age of 40, how much would you have to save each year to retire at 65 with a portfolio of \$1,666,666? The answer again depends upon your portfolio return. At a compounded 10% return (tax deferred), you would have to save \$1,284 per month. However, given a 13% return, you would only have to save \$789 per month. I don't want to encourage anyone to save less--I just want to again point out the importance of portfolio return on your investments especially during the savings years.

When looking at a long-term picture, just a couple of percentage points can make a big difference in how

* Larry Waschka, a registered investment advisor, is the president of Waschka Capital Investments, an independent fee-based investment advisory firm managing over \$80 million in assets. He is author of *The Complete Idiot's Guide to Getting Rich* and has been quoted in *L.A. Times*, *Your Money Magazine*, *Kiplingers*, *Mutual Fund Market News*, and *Financial Planning Magazine*. He recently appeared on the national programs CNN Financial News and MS-NBC.

you will live in retirement. The first question you must ask yourself is, "Do I have the time and the interest to manage my money?" Certainly, there are plenty of professionals who do. The second, but equally important, question is, "Could I do as well as a professional money manager, net of fees?" If the answer to either of these questions is no, then you should consider hiring professional help.

So let's say you need help. Who do you call? What questions should you ask? How much time will all this take? Well, not much if you know what you want.

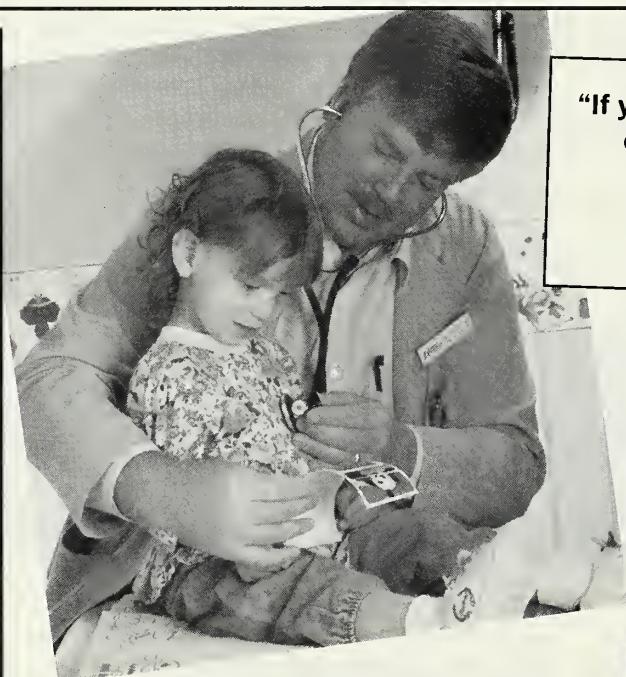
If you really want someone to manage your money for you, who has no incentive to sell you anything for a commission, you need to consider hiring an independent fee only manager. Because their annual fee is based upon a percentage of the amount of assets they manage for you, there is no conflict of interest. The fee-only arrangement not only motivates the manager to make you as much money as he/she can, it also motivates them to save you money on transactions. Look in the phone book under "Investment Advisors" and call several of them.

First, ask if they are fee-only. If they say they are fee and commission based, tell them, "no, thank you." Conflicts of interest still exist in this arrangement. Sec-

ond, ask how long the advisor has been in the investment industry. A ten-year veteran experienced the 1987 crash, the 1990 correction, and the hey days of '95 and '96. You may also want to ask about the depth of the advisor's staff. How much experience do they have? How many registered investment advisors work there? Third, ask how much money they have under management. Any manager with \$25 million or more under management should be considered. Fourth, ask about their track record. How well did they do last year? How well did they do in 1994 (a very tough year)? Fifth, ask who makes the investment decisions. Some managers base all their decisions on an investment newsletter so they can use their performance figures.

One last thing--ask for a list of client references. Call a few and ask them about the advisor's service, performance, and integrity. Ask them what they like about the advisor and what they dislike. This conversation will tell you a lot.

In the end, you need to be comfortable with the advisor you select. The only way to achieve this comfort is to do a little homework. If you'll take the time to find the right advisor, your portfolio will have more potential for exceeding your expectations. Plus, you might even sleep better.



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A Good History Usually Gives a Diagnosis

J. Kelley Avery, M.D.*

Case Report

At 3:00 a.m. abdominal pain and vomiting began. At 4:30 a.m. she was seen by the emergency department (ED) physician, who discharged her at 6:30 a.m. Thirty hours later she was returned to the ED in cardiorespiratory arrest and died following an emergency laparotomy. She was 22 years of age!

When the patient was seen on admission to the ED, the history was recorded by the ED physician: "Abdominal pain since 3:00 a.m. Vomited two times. Normal BM yesterday. No flatus since onset. Menstrual history normal." Examination: "22-year-old woman appears in pain. VS normal. Chest, heart, lungs OK. Abdominal tenderness, lower abdomen, but no guarding or rebound. Less tenderness mid-abdomen. Bowel sounds positive."

Laboratory studies were unremarkable except for a blood glucose of 194 mg/dl.

Nursing note at 4:30 a.m.: "Alert and oriented. Appears in pain. Rolling around on the stretcher. Medicated for pain. Sleeping since. The record indicates that she was given Talwin 30 mg and Phenergan 25 mg by injection at 5:50 a.m. Discharged home with instructions at 6:35 a.m." She was given an antacid/antispasmodic and Phenergan suppositories for use at home. She was told to return to ED if further problems occurred "this weekend."

The narrative is blank until she returned "this weekend" 30 hours after leaving the ED. CPR was in progress when the patient arrived. She was resuscitated, hydrated, acidosis corrected, and taken to the OR, where strangulated, infarcted small bowel was found to have herniated through a defect in the mesentery. The dead bowel was resected, but despite vigorous and heroic efforts, the patient died about 6:00 p.m., four hours after surgery.

In the lawsuit that followed, the physician was charged with failure to take an adequate history and do a thorough physical examination, failure to monitor adequately in the ED, and failure to use appropriate testing to determine the true nature of her complaints. Going to trial with a record as incomplete as

this one was considered unwise, and the case was settled.

Loss Prevention Comments

The loss prevention lesson to be learned here can be derived from the charges filed against this ED physician. There was ample evidence that the doctor did not get a good history. He missed the significance of the sudden onset of severe pain and the prompt vomiting that followed. He made no comment as to the apparent severity of the pain. He recorded "No flatus since onset." The nurse, in her note two hours before the patient was discharged from the ED, noted that the patient was in pain severe enough to cause her to roll around on the table and to need the side rails to keep her on the stretcher. There was no note that the patient was re-evaluated by the ED physician in view of these findings. In fact, there was no evidence in the record that the patient was checked at all from the time of her initial examination to the time of her discharge except to administer the injection. This gave validity to the charge of failure to adequately monitor the patient in the ED.

The initial examination was brief as far as the record is concerned. No pelvic examination was done even though it is apparent that the physician was careful to obtain an acceptable menstrual history. One wonders if the doctor put his hand on this young woman's abdomen or listened to the bowel sound after the initial examination. As rapidly as this patient's condition was deteriorating, it is reasonable to speculate that had careful monitoring been done, the bowel sounds would have been found hyperactive, and the abdomen itself would have been more generally tender with some distension, suggesting the need for an abdominal x-ray.

We had no diagnosis when a narcotic was given to relieve the symptoms, which, if carefully observed, would have led to the suspicion of a rapidly progressing process demanding early exploration of the abdomen.

It was the weekend, the ED was busy, and the tendency was, as it frequently is, to bet on the "odds" and not think about the "long shot." Almost every time, when confronted by a patient with an acute problem, a physician needs to prepare for the worst while hoping for the best.

* Dr. Avery is Chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the April 1995 issue of the *Journal of the Tennessee Medical Association*. It is reprinted with permission.

Medicare Post Pay Review Audits

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EMERGENCY MEDICINE



Emergency Medicine, a new feature section in The Journal, will appear quarterly. Send your comments and/or contributions to The Journal's editorial office.

Delayed cardiac tamponade following a stab wound: a case report

Jerel Lee Raney, M.D.*
Elicia Sinor Kennedy, M.D.**

Abstract

Penetrating trauma is a frequent presentation to urban emergency departments (EDs). Pericardial effusion with cardiac tamponade is a possible complication of penetrating trauma to the chest, to the back, and to the upper abdomen. Even if patients are stable initially without signs or symptoms of cardiac tamponade, there can be delayed sequelae. Presented is a case of cardiac tamponade diagnosed 21 days after a stab wound to the epigastrium.

Introduction

Penetrating chest trauma with cardiac injury is associated with pre-hospital mortality rates between 29 and 83 percent.¹ Of those that do arrive to the ED alive, 80-90 percent of stab wounds will demonstrate cardiac tamponade.² Classically, the triad of muffled heart sounds, hypotension, and distended neck veins has been used to make a clinical diagnosis of cardiac tamponade.¹ When central venous monitoring and continuous cardiac monitoring are utilized, a rise in central venous pressure along with tachycardia are the most reliable signs of cardiac tamponade.³ In addition, pulsus paradoxus (a drop in systolic blood pressure greater than 10 torr on inspiration) and electrocardiogram (ECG) changes (electrical alternans, low QRS voltage) are sometimes present.^{3,4} Even if none of the above signs are present at initial presentation or during hospitalization there still must be a high index of suspicion for cardiac injury with penetrating chest, back, and upper abdominal trauma. We present the case of a 35 year old male initially asymptomatic without signs or symptoms of cardiac injury following a stab wound to the epigastrium. He presented 21 days later with pericardial tamponade.

Case Report

A 35 year old black male was stabbed in the chest during an altercation. The knife was reportedly six to seven inches long. After initial stabilization at an outside facility, he was transferred to our hospital. At the outside facility laboratory, values drawn showed a hematocrit (HCT) of 32 percent, and a hemoglobin (Hgb) of 11.0 gm/dl. The patient remained stable during transport. On arrival to our ED, the patient was alert and oriented, complaining only of pain at the site of the stab wound. He had no significant past medical history and was taking no medications. Physical examination revealed a well developed, well-nourished black male in no acute distress. Vital signs were as follows: pulse 80/min, blood pressure (BP) 120/72 mm Hg, respiratory rate (RR) 22/min, oxygen saturation (O₂ Sat) 99% on 2 liters oxygen by nasal canula, temperature 98.9. Head, ears, eyes, nose and throat examinations were unremarkable. There was no jugular venous distention (JVD). Lungs were clear bilateral and heart tones were easily audible without murmur or rub. There was a 2 cm stab wound to the left of the xiphoid process, with no active bleeding. The abdomen was non-tender, non-distended and there were active bowel sounds. Rectal examination was negative for occult blood, as was a naso-gastric aspirate. Pulses were easily palpable in all extremities. Chest x-ray (CXR) showed a normal cardiac silhouette without pneumothorax or hemothorax (figure 1). Abdominal x-ray was negative for air/fluid levels or free air. A bedside echocardiogram (ECHO) done in the ED revealed no pericardial fluid and normal cardiac wall motion. Laboratory values drawn at our institution were as follows: white blood count (WBC)- 18.6 K/uL, HCT-33.7 percent, Hgb-11.3 gm/dL, platelets- 252,000.

The patient was admitted to the trauma surgery service. Serial hematocrits were obtained and serial

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** Dr. Raney is a second year resident at UAMS, Department of Emergency Medicine.

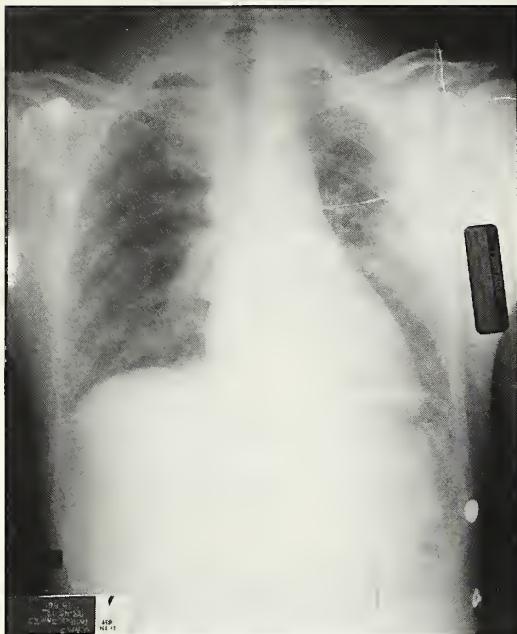


Figure 1: Portable chest x-ray at initial presentation



Figure 2: Portable intra-operative chest x-rays

abdominal examinations were performed. His HCT remained stable and his abdomen remained non-tender. In addition he showed no clinical signs or symptoms of pericardial tamponade. Echocardiogram and CXR were not repeated. He was discharged 24 hours after admission.

Twenty-one days after his initial hospitalization the patient was taken to an outside hospital. He complained of weakness, diaphoresis, shortness of breath, and a syncopal episode on the day prior to presentation. He had been complaining of general malaise since his discharge, with the symptoms worsening acutely. Initial work-up prior to transfer included a chest x-ray that showed an enlarged cardiac silhouette and bilateral pleural effusions. ECG monitoring revealed sinus tachycardia and non-specific T-wave abnormality. A large pericardial effusion with cardiac tamponade was seen on ECHO. The patient received a 1 liter fluid bolus and was transferred to our ED. On arrival, physical examination revealed a well-developed male in moderate respiratory distress. Vital signs were: Pulse-125/min, BP-118/85, RR-26. Physical examination was significant for JVD to the angle of the jaw, decreased breath sounds at the lung bases bilaterally, and distant heart tones without audible murmur or rub. The abdomen was diffusely tender. Rectal examination was normal. A repeat chest x-ray showed an enlarged cardiac silhouette and small pleural effusions (Figure 2- intra-operative). A repeat echocardiogram confirmed right atrial and right ventricular diastolic collapse with a large pericardial effusion. Laboratory studies showed: WBC 11.5K/uL, Hgb-7.6 gm/dL,

HCT-23.0%, Platelets-533,000.

The patient was taken to the operating room where an exploratory laparotomy was performed through a sub-xiphoid incision. Abdominal exploration revealed a markedly enlarged liver and no intra-abdominal injury. The pericardium was opened and one liter of clotted and fresh blood was aspirated. No evidence of a cardiac wound was reported in the operative note. A right angle chest tube was placed in the mediastinum to drain the pericardium. The postoperative course was remarkable only for one episode of increased temperature and elevated WBC, both of which resolved and blood and urine cultures were negative for growth. The patient had no further complaints of shortness of breath. Serial CXRs showed no increase in size of the cardiac silhouette. A repeat ECHO on the day prior to discharge showed no reaccumulation of fluid. The patient was discharged on post-operative day 6. He returned 10 days after discharge for a follow-up ECHO which was negative.

Discussion

It is generally agreed that an unstable patient with penetrating chest trauma should undergo ED thoracotomy with rapid transfer to the operating room.^{1,5} However, there has been much debate regarding the initial approach to the stable patient without signs or symptoms of cardiac injury.⁶⁻¹⁰

Early surgical intervention has been advocated for the stable patient.^{6,7,8} It has been shown that patients without signs or symptoms of cardiac tamponade could have occult cardiac injury.⁶ An aggressive surgical approach

could potentially eliminate the rare, but important, delayed sequelae from missed cardiac injury.⁸

Pericardiocentesis, long used to diagnose and treat pericardial tamponade, has previously been recommended as part of the initial management of penetrating chest trauma.⁹ Although a rapid procedure which can provide quick results, pericardiocentesis is associated with a high false negative rate in cases subsequently shown to have blood in the pericardium.⁵ This is thought to be due to the inability to aspirate clotted blood.

Two-dimensional thoracic echocardiography done in the ED is becoming the modality of choice in evaluating the heart and pericardium in penetrating chest trauma.¹⁰⁻¹³ It is non-invasive and can be done rapidly at the bedside. Nagy et al¹¹ reviewed the charts of 121 patients with penetrating chest wounds. Thirty-one patients had a positive ECHO, sixteen of whom had pericardial blood confirmed with sub-xiphoid pericardial window. One patient with a negative ECHO subsequently deteriorated, with a repeat ECHO five hours later positive for pericardial effusion. ECHO has been shown to decrease time to diagnosis in penetrating cardiac injury when used as an early diagnostic tool. Freshman et al¹² found ECHO to be a useful triage tool, with patients having small pericardial effusions being admitted to ward beds and monitored without adverse outcome.

Bolton et al¹³ demonstrated that a negative echocardiogram does not rule out occult cardiac injury. In his study, he presented five patients with penetrating cardiac trauma, all of whom underwent echocardiography. Two of the patients had negative initial ECHOs, but all five had major intrapericardial injuries.

Chest x-ray findings are unreliable in the diagnosis of pericardial effusion at initial presentation.¹³ Rarely does one see the classic enlarged silhouette seen in chronic tamponade. In addition, ECG findings are insensitive in diagnosing pericardial effusions.⁴ Physical examination findings of tamponade may not be present initially, even after fluid resuscitation.¹

Delayed pericardial tamponade is a rare phenomenon in penetrating chest trauma, with less than ten cases in the medical literature. The majority of experience with delayed cardiac tamponade comes from open heart surgery. Maronas et al¹⁴ reported on 21 patients who developed delayed cardiac tamponade after surgery. In these patients, clinical suspicion and echocardiography were shown to be the most reliable methods of diagnosis. The experience from open heart surgery is relevant to this case as stab wounds are similar to surgical incisions in the myocardium, and the clinical presentation of delayed tamponade is likely to be similar.¹

The debate regarding the initial work-up of pen-

etrating chest trauma will likely continue. In our case, the initial echocardiogram was negative for effusion, and the patient exhibited no signs or symptoms of cardiac tamponade. Only emergent operative intervention could possibly have detected the occult injury. However, the effusion may have been detected earlier with a repeat echocardiogram prior to discharge or very soon afterwards as an outpatient. This case demonstrates that one must have a high index of suspicion for cardiac injury in all cases of penetrating chest trauma.

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Cardiology Commentary and Update

Pius Manavalan, M.D.*
Derrick Richardson, M.D.*
Richard Rayford, M.D., Ph.D.**
J. David Talley, M.D.**

ECG and Cardiac Enzymes Changes Associated with Subarachnoid Hemorrhage

An acute cerebrovascular event, especially subarachnoid hemorrhage, may cause changes in the electrocardiogram (ECG) and cardiac enzymes diagnostic of an acute myocardial infarction (MI). We report a patient who sustained a massive subarachnoid hemorrhage who had ECG changes and elevated cardiac enzymes consistent with a non-q wave MI.

Patient Report

A 47-year-old female with a history of systemic arterial hypertension (Table 1, Complete Problem List) was admitted to the Neurosurgery Service with the sudden onset of a severe occipital headache associated with altered mentation. The patient did not have a history of myocardial ischemia or infarction.

The ECG showed ST segment elevation and T wave inversion in leads V₁-V₆ (Figure 1). Serial cardiac enzymes had a rising trend, peaking at 985 U/L, with an MB fraction peak of 25.2 (Table 2). A diagnosis of a non-q MI was made and patient was placed on telemetry monitoring and begun on heparin, captopril, atenolol, and nimodipine.

A cranial CT scan revealed a massive subarachnoid hemorrhage. A cerebral angiogram showed multiple aneurysms and diffuse vasospasm. She was considered to be at a prohibitively high risk for surgical intervention and intra-arterial GDC coils were inserted at the site of the intracranial bleeding. The patient condition continued to deteriorate and she expired on the 5th hospital day. A post-mortum examination was not obtained.

Pathophysiology of the Cerebral-Induced Myocardial Necrosis

The autopsy examination of patients who succumb to an acute cerebral event, as our patient did, frequently

shows sub-endocardial or scattered myocardial necrosis, without extensive coronary artery disease or transmural myocardial necrosis.¹ An acute cerebral vascular event may cause hypothalamic dysfunction or hemorrhage thereby increasing the level of circulating catecholamines. Similar changes are seen in hyperadrenergic animals and in patients with a pheochromocytoma.² These changes can be reproduced by experimentally stimulating the posterior-lateral hypothalamic centers in the brain responsible for autonomic regulation.³

The heightened autonomic tone may lead to focal myocardial necrosis in multiple ways. First, the elevated blood pressure increases wall tension potentiating endothelial cell ischemia. Secondly, the elevated catecholamine levels may decrease myocardial oxygen supply by causing coronary artery vasospasm.⁴ Finally, catecholamines may act as a direct toxin to the individual myocardial cells. Other mechanisms contributing to myocardial necrosis include electrolyte imbalance, hypercortisolism, vagal dysregulation and activation of the renin-angiotension system.¹

The Spectrum of Cardiac Abnormalities

The Electrocardiogram. ECG changes are seen in 20-80% of patients with a cerebrovascular accidents.^{5,6,7,8} These changes are most frequently seen in patients with subarachnoid hemorrhage, intracerebral hemorrhage,

Table 1: Complete Problem List

1. Systemic arterial hypertension
2. Subarachnoid hemorrhage
3. Myocardial disease
 - Etiology → subarachnoid hemorrhage
 - Anatomy → unknown
 - Physiology → non-Q wave myocardial infarction
 - Objective assessment → unknown
 - Functional capacity → unknown

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** Drs. Rayford and Talley are with the Division of Cardiology at UAMS.

Table 2: Serial Changes in the Total and Iso-enzymes of Creatine Kinase

Hospital Day	CK (30-235 U/L)	CK-MB (0-7.2 U/L)	RI (0-2.5)
Day 1	436	20.7	4.7
Day 2	812	25.2	3.1
Day 2	985	17.9	1.8
Day 3	866	16.5	1.9
Day 3	797	14.4	1.8
Day 4	802	15.7	2.0
Day 4	802	10.1	1.3
Day 5	788	7.0	0.9

Abbreviations: CK = creatine kinase, RI = relative index

and suspected cerebral embolism with infarction. Similar changes may be seen in a patient who has sustained a severe head injury or those who have a space-occupying lesion.

The classic ECG pattern of cerebrovascular accident is the *triad* of deep T wave inversions, prominent U waves, and marked prolongation of the QT interval. These changes have been coined the "CVA T wave pattern."⁴ The T wave inversion is striking. They have widely splayed arms and are blunted at the nadir. Occasionally the T waves are so wide that they subtend the entire ST interval. This is in contrast to the narrower, sharply inscribed, relatively symmetric T wave inversion characteristic of an MI. These differences however are not absolute.

Marked prolongation of the corrected QT interval often with prominent U waves may also be seen. The U waves may be buried within the T wave, giving it an irregular appearance. Prolongation of the QT interval with T wave inversion are also seen in MI but rarely to the degree seen with an acute cerebrovascular event.

New Q waves are not commonly seen in patients with a primary neurological event. Interestingly, patients who evolve new Q waves do not develop the deep T wave inversions. There are, however, reports of new Q waves without autopsy evidence of transmural infarction. Other common ECG findings include a variety of bradycardias and tachycardias and ST segment depression or elevation.

Cardiac Enzymes. Cardiac enzymes are elevated in approximately 50% of patients with an acute cerebrovascular event.⁹ The total creatinine kinase and the CK-MB are both increased, and the time course of the elevation is similar to that seen with an acute MI. A higher rate of mortality is observed in patients with an acute cerebral event who have both ECG changes and elevated cardiac enzymes.¹⁰

Echocardiogram. Abnormalities seen in the echocardiogram and left ventriculogram include transient global or segmental hypokinesis or akinesis. Mural thrombi have also been reported. The degree of car-

diac dysfunction is closely associated with the severity of the subarachnoid hemorrhage.¹¹

Conclusions

An acute cerebrovascular disorder, notably subarachnoid hemorrhage, frequently cause ECG changes and elevated cardiac enzymes consistent with an acute MI. At autopsy, these changes have not been generally associated with transmural infarction or pathologically significant coronary artery disease. A higher

rate of mortality is observed in patients who have both ECG changes and elevated cardiac enzymes.

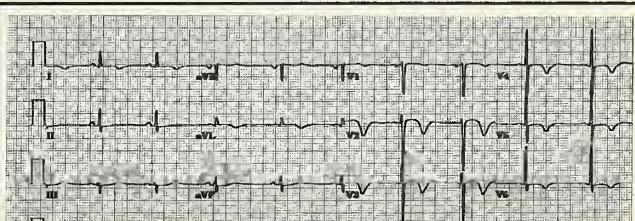


Figure 1: The 12 lead electrocardiogram shows normal sinus rhythm, ST segment elevation, and deep T wave inversion in leads I, aVL, and V₁-V₆.

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

Methyl Parathion Facts: A Physician Resource

Methyl parathion, also known as "cotton poison," is an organophosphate insecticide intended for use on cotton, soybeans and other crops. As an insecticide, it should be used only in open fields to control insects. It is used on cotton, soybeans, and vegetable fields in the South.

Methyl parathion has been illegally used as a pesticide for control of cockroaches and other household pests in some homes, businesses and day care centers in Mississippi, Louisiana and Tennessee. In Arkansas, methyl parathion was reportedly used in homes in the West Memphis area and possibly other locations in eastern Arkansas.

Indoor use of this chemical can cause severe health problems. The main routes of exposure are ingestion and dermal contact. Immediately after spraying, inhalation might also be a significant source of exposure.

Symptoms

Severe poisoning will lead to salivation, "pinpoint pupils," blurred vision, bradycardia, muscle fasciculation, diarrhea and altered mental status - irritability or lethargy. Less severe poisoning can cause headaches, nausea, vomiting, and diarrhea or other nonspecific symptoms. Most textbook descriptions of symptoms relate to acute poisoning, usually among agriculture workers. Although these symptoms can be seen in persons exposed to contamination in the home, in cases of chronic low-dose exposure, symptoms and signs might be more subtle. Children (particularly less than 6 months of age), pregnant women and homebound adults are considered particularly susceptible populations.

Testing

Traditionally, red cell cholinesterase has been the preferred method of confirming cholinesterase-inhibiting pesticide toxicity. However, because the range of normal red cell cholinesterase is so wide, depression of cholinesterase levels is often difficult to confirm. Moreover, cholinesterase depression is not specific to methyl parathion and may occur with other organophosphates, as well as in early pregnancy, distance runners, liver disease and oral contraceptive use. If you

believe it is likely a that patient's illness may be related to methyl parathion exposure, red cell or plasma cholinesterase may be useful, but serial measurement over several months may be necessary to demonstrate a change from baseline.

Treatment

The first step in treatment for individuals with demonstrated high exposure (high levels in home) is removal from the source. Treatment for clinically symptomatic poisoning is covered in most standard texts and usually includes atropine, pralidoxime (2-PAM) and supportive therapy. After interruption of exposure, clinical symptoms usually resolve rapidly. Long-term human health effects related to exposure to methyl parathion have not been demonstrated.

Resources

A case study titled "*Cholinesterase-Inhibiting Pesticide Toxicity*" is available for those desiring further information. Continuing medical education credit (CME) is available to physicians who complete the case study. If you would like a copy of the case study please call (501)661-2604.

For more information on symptoms, testing and treatment of methyl parathion, please contact the Arkansas Department of Health, Division of Epidemiology at (501)661-2597 during normal business hours.

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501-785-0400

Reported Cases of Selected Diseases in Arkansas Profile for February 1997

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Feb. 1997	Total Reported Cases YTD 1997	Total Reported Cases YTD 1996	Total Reported Cases 1996	Total Reported Cases YTD 1995	Total Reported Cases 1995
Campylobacteriosis	9	24	22	241	15	153
Giardiasis	12	27	21	182	22	131
Shigellosis	4	23	10	176	24	176
Salmonellosis	8	21	35	455	22	338
Hepatitis A	17	48	114	503	36	663
Hepatitis B	6	10	20	88	11	83
HIB	0	0	0	0	0	6
Meningococcal Infections	10	12	8	35	11	39
Viral Meningitis	2	4	6	38	0	33
Lyme Disease	0	0	1	27	2	12
Rocky Mountain Spotted Fever	0	0	0	22	0	31
Tularemia	0	0	0	20	1	22
Measles	0	0	0	0	2	2
Mumps	0	0	0	1	1	6
Gonorrhea	381	794	834	5050	564	5437
Syphilis	61	116	143	706	157	1017
Legionellosis	0	0	0	1	2	8
Pertussis	0	3	1	15	6	59
Tuberculosis	20	20	16	225	26	271

For a listing of reportable diseases in Arkansas, call the Arkansas Department of Health, Division of Epidemiology, at (501) 661-2893.

New Members

BLYTHEVILLE

White, John S., Obstetrics/Gynecology. Medical Education, Loyola University Stritch School of Medicine, Maywood, IL, 1972. Internship/Residency, Los Angeles County Hospital, CA, 1973/1976. Board certified.

EL DORADO

Schonefeld, Michael D., Nephrology. Medical Education, Louisiana State University School of Medicine, New Orleans, 1990. Internship/Residency/Fellowship, UAMS. Board certified.

Winfrey, Cheryl D., Physical Medicine & Rehabilitation. Medical Education, East Tennessee State University James Quillen College of Medicine, Johnson City, 1992. Internship, University of Tennessee, Memphis, 1993. Residency, Carolina's Medical Center, 1996.

FORREST CITY

Healy, Richard Oliver, Family Practice. Medical Education, University College Dublin, Ireland, 1970. Internship, Illinois Central Hospital, Chicago, 1971. Residencies, Dalhouse University and University of Tennessee, 1977/1996. Board certified.

LITTLE ROCK

Antakli, Tamim, Thoracic. Medical Education, Aleppo University, Syria, 1983. Internship, Methodist Hospital, Brooklyn, NY, 1989. Residencies, Methodist Hospital, Brooklyn, NY, and UAMS, 1993/1996. Board certified.

Grissom, James R., Medical Oncology and Hematology. Medical Education, UAMS, 1975. Internship, UAMS, 1976. Residency, Tulane University Medicine Program, New Orleans, 1979. Board certified.

Harms, Steven, E., Radiology. Medical Education, UAMS, 1978. Internship, University Hospital, 1979. Residency, UAMS, 1982. Board certified.

PARAGOULD

Sangster, William McCoy, General Surgery. Medical Education, University of Missouri School of Medicine, Columbia, 1973. Internship/Residency, University of Missouri, 1974/1982. Board certified.

PINE BLUFF

Harvey, Jerry Lynn, Family Practice. Medical Education, Oklahoma State University - College of Osteopathic Medicine, 1993. Internship/Residency, AHEC-Pine Bluff, 1994/1996. Board certified.

Tejada, Ruben, Internal Medicine. Medical Education, Universidad Central del Este, Dominican Republic,

1988. Internship, Centro Medico U.E.E., Dominican Republic, 1989. Residency, Raritan Bay Medical Center, New Jersey, 1996.

WARREN

Purvis, Kenneth W., Family Practice. Medical Education, University of Texas Medical Branch, Galveston, 1978. Internship/Residency, John Peter Smith Hospital, 1979/1981. Board certified.

WEST MEMPHIS

Ward-Jones, Susan Elizabeth, Internal Medicine. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1996.

WHITE HALL

Coleman, Roy Douglas, Family Practice. Medical Education, UAMS, 1993. Residency, AHEC-Pine Bluff, 1996. Board certified.

RESIDENTS

Chumley, Willard Truman Jr., Anesthesiology. Medical Education, UAMS, 1993, Internship, AHEC-Pine Bluff, 1994. Residency, UAMS.

Graves, Charles Leon, Psychiatry. Medical Education, UAMS, 1993. Residency/Fellowship, UAMS.

Haley, Tonya, Pediatrics & Neurology. Medical Education, UAMS, 1991. Internship, UAMS, 1992. Residency, Children's Hospital Medical Center.

Hall, John Culley, Emergency Medicine. Medical Education, University of Texas Southwestern Medical School, Dallas, 1995. Residency UAMS.

Heise, Brian Allan, Family Medicine. Medical Education, Louisiana State University Medical Center, Shreveport, 1995. Internship/Residency, University of Texas Medical Branch, Galveston.

Hutcheson, James Arthur, General Surgery/Otolaryngology. Medical Education, UAMS, 1995. Internship/Residency, UAMS.

Kazakevicius, Rimantas, Surgery/Family Medicine. Medical Education, Vilnius University Medical Faculty, Lithuania, 1980. Internships, Vilnius University Clinic and UAMS.

Rohde, Melinda S., Pediatrics. Medical Education, University of Oklahoma College of Medicine, Oklahoma City, 1995. Residency, UAMS.

STUDENTS

Michael Gregg Barden
Jacqueline Sherrill O'Donald
David Neal Shenker

AMS Sponsors Workshops in Little Rock



October 16, 1997 Managed Care Update: *Advanced Strategies for Practice Survival*

This workshop will show you how to become more proactive in the managed care marketplace. Numerous case examples will be used to illustrate the following topics:

- * getting into the better plans *
- * tracking managed care plan results *
- * reorganize some of the staff jobs *
- * learn about outcome studies *
- * determine ways to reduce practice overhead in a reduced-reimbursement environment *

December 4, 1997 Coding Analysis to Maximize Reimbursement in 1997

A hands-on workshop with informative case studies. Major emphasis is on the complex relationship between the procedure, the diagnosis, place of service, provider status and patient financial class for traditional and non-traditional (HMO/PPO) claims processing. Workshop requires a background in the basics of CPT, ICD-9 and the HCFA-1500.

For more information call 501-224-8967

To
those physicians who volunteer
through the Arkansas Health
Care Access Foundation,
Thank You!

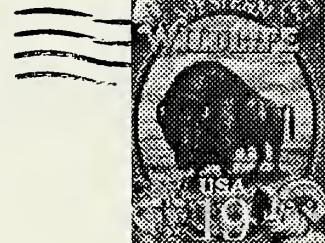
As you can see from a sampling of
letters we have received, your
involvement in our program is
appreciated and in many
cases life-saving.

It has been three days since you
sent me to the doctor and I have
a ways to go to be 100%, but I can
breathe and walk across the room
now. I had given up hope almost,
and I remembered Arkansas Health
Care. The doctor gave me two of
the medicines I needed and the
pharmacy you sent me to filled the
"chewed" Your doctor even
two weeks previously. I'm starting
to feel good again. God bless you.

I would like to say thank you first
of all. Your program made it
possible for me to have a
mammogram when I had no
where else to turn. I did not
realize there was such a program.
...it is a much needed program.
Thanks again.

Western Wildlife
As Easterners moved West, pioneers
found animals as exotic as the landscape:
buffalo, prairie dogs, bears, beaver, bighorn
sheep, cougars, wolves and rattlesnakes.
The eagle became a national symbol.

I wanted to thank everyone
involved with this
program. We had no
one else to turn to
and we were in desperate
need of doctors and
medications.
Your program has
helped us through a very
difficult time.

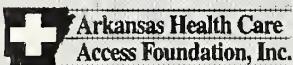


Arkansas Health Care Access
Foundation
P O Box 56248
Little Rock AR
72215-6248

For more
information
on how
you can help,
call AHCAF at
(501) 221-3033
or (800) 950-8233

Due to your generous
assistance, I was able to
see an eye doctor and no
longer fear the loss of my
vision. Thank you all for
being there.

When I needed medical
attention, I was blessed with the
knowledge of your program.
There were kind and helpful
people to guide me.



THANK YOU FOR MAKING THE DIFFERENCE!

Resolutions

Monroe Dixon McClain, M.D.

WHEREAS, the members of the Pulaski County Medical Society are deeply saddened by the recent death of a respected member, Monroe Dixon McClain, M.D.; and

WHEREAS, Dr. McClain was a loyal member of this organization since 1939, servicing capably and enthusiastically in numerous positions of leadership; and

WHEREAS, Dr. McClain's patriotism was evidenced by his distinguished service in the Medical Corps during World War II; and

WHEREAS, his concern and compassion for his patients will be remembered as the hallmark of his practice;
BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the permanent records of this Society; and

THAT, a copy be sent to Dr. McClain's family as a token of our true sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

All Resolutions Adopted

Board of Directors

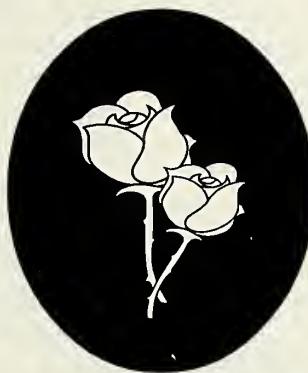
March 26, 1997

By Order of the Memorials Committee

Fred O. Henker, III, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.



Ferdinand E. Greifenstein, M.D.

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of an esteemed colleague, Ferdinand E. Greifenstein, M.D.; and

WHEREAS, Dr. Greifenstein was a member of this society for many years always giving generously of his time and talent towards its betterment; and

WHEREAS, Dr. Greifenstein will be long remembered by his peers, friends and family as a gracious and caring man who dedicated his life to the service of others;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the archives of this Society; and

THAT, a copy be forwarded to Dr. Greifenstein's family as an expression of our sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

All Resolutions Adopted

Board of Directors

March 19, 1997

By Order of the Memorials Committee

Fred O. Henker, III, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

Things To Come

June 6-8

Alumni Weekend '97 - University of Arkansas College of Medicine Alumni. Alumni Classes of 1932, 1937, 1942, 1947, 1952, 1957, 1962, 1967, 1972, 1977, 1982 and 1987 will be reuniting this year for a variety of special activities beginning on Friday afternoon, June 6th and ending with a brunch on Sunday, June 8th. All alumni and Caduceus Club members are welcome to attend. Call the Arkansas Caduceus Club at (501) 686-6684 for registration forms and more information.

June 10-11

19th Annual General Motors Cancer Research Foundation Annual Scientific Conference. National Institutes of Health, Bethesda, Maryland. For more information, call (202) 636-8745.

June 26-27

The Effectiveness of Prenatal Care: New Evidence, New Paradigms. Harvard School of Public Health, Harvard Longwood Medical Campus, Boston, Massachusetts. Presented by the Department of Maternal and Child Health and the Harvard Center for Children's Health. Supported by a grant from the Agency for Health Care Policy and Research. For more information, call (617) 432-1171.

July 4-6

27th Annual Sports Medicine Symposium. Sheraton Atlantic Beach Resort, Atlantic Beach, North Carolina. Presented by the Sports Medicine Committee of the North Carolina Medical Society. For more information, call (800) 722-1350.

July 7-10

17th Annual Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by UC Davis School of Medicine and Medical Center, Division of Cardiovascular Medicine and Office of Continuing Medical Education. For more information, call (916) 734-5390.

July 12-18

22nd Annual National Wellness Conference. University of Wisconsin, Stevens Point, Wisconsin. For more information, call (800) 243-8694.

September 4-6

International Symposium on Gasless Laparoscopy. Bochum, Germany. Sponsored by the American Association of Gynecologic Laparoscopists. For more information, call 1-800-554-2245.

September 5-7

4th Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 18-20

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

September 23-28

International Congress of Gynecologic Endoscopy/ AAGL 26th Annual Meeting. The Washington State Convention & Trade Center, Seattle, Washington. Sponsored by the American Association of Gynecologic Laparoscopists. For more information, call 1-800-554-2245.

October 15-19

2nd Annual CME Course - Infectious Disease '97 Board Review: A Comprehensive Review for Board Preparation. The Ritz-Carlton, Tysons Corner, McLean, Virginia. Sponsored by The Center for Bio-Medical Communication, Inc. For more information, call (201) 385-8080.

October 26-30

1997 State-of-the-Art Conference: Occupational and Environmental Medicine. Nashville, Tennessee. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (847) 228-6850, ext. 152.

November 13-14

23rd Annual Symposium on Obstetrics & Gynecology. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

May 30 - June 1

19th Annual Family Practice Intensive Review. Location: UAMS, Education II Building, Little Rock. Program Presenters: Department of Family and Community Medicine. Accrediting organization sponsoring program: UAMS College of Medicine. Hours of Category 1 credit offered: Up to 20 hours of CME credit. Fee: TBA. For more information, call 501-661-7962.

October 3 - 5

Primary Care Update (Management of Top 20 Ambulatory Diagnoses). Location: Gaston's Lodge on the White River. Sponsor: Washington Regional Medical Center. For more information, call 501-442-1823 or 1-800-422-0322.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

FAYETTEVILLE-WASHINGTON REGIONAL MEDICAL CENTER

Cardiology Conference, 3rd Wednesday of every month, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided
Chest Conference, 1st Wednesday of every month, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Primary Care Conferences, every Monday, 12:15 - 1:15 p.m., WRMC, Baker Conference Center, no fee, lunch provided
Tumor Conference, every Thursday, 7:30 - 8:30 a.m., WRMC, Baker Conference Center, no fee, breakfast provided

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.
Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Breast Conference, 3rd Thursday, 7:00 a.m., J.A. Gilbreath Conference Center, Room #20
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Disorders Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

The University of Arkansas College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor the following continuing medical education activities for physicians. The Office of Continuing Medical Education designates that these activities meet the criteria for credit hours in category 1 toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Multi-Disciplinary Cancer Conference (Tumor Board), Wednesdays, 12:00 noon, ACRC 2nd floor Conference Room.

Anesthesia Grand Rounds/M&M Conference, Tuesdays, 6:00 a.m., UAMS Education III Bldg., Room 0219.
Autopsy Pathology Conference, Wednesdays, 8:30 a.m., VAMC-LR Autopsy Room.
Cardiology-Cardiovascular & Thoracic Surgery Conference, Wednesdays, 11:45 a.m., UAMS, Shorey Bldg., room 3S/06
Cardiology Grand Rounds, 2nd & 4th Mondays, 4:00 p.m., UAMS Shorey Bldg., 3S/06
Cardiology Morning Report, every morning, 7:30 a.m., UAMS, Shorey Bldg. room 3S/07
Cardiothoracic Surgery M&M Conference, 2nd Saturday each month, 8:00 a.m., UAMS, Shorey Bldg. room 2S/08
CARTI/Searcy Tumor Board Conference, 2nd Wednesday, 12:30 p.m., CARTI Searcy, 405 Rodgers Drive, Searcy.
Centers for Mental Healthcare Research Conference, 1st & 3rd Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr.
CORE Research Conference, 2nd & 4th Wednesday each month, 4:00 p.m., UAMS, Child Study Ctr., 1st floor auditorium
Endocrinology Grand Rounds, starting October 1996, Fridays, 12:00 noon, ACRC Bldg., Sam Walton Auditorium, 10th floor
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., UAMS Hospital, room 3D29 (1st Thurs. at ACH)
Gastroenterology Pathology Conference, 4:00 p.m., 1st Tuesday each month, UAMS Hospital
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Hospital, room 3D29
In-Vitro Fertilization Case Conference, 2nd & 4th Wednesdays each month, 11:00 a.m., Freeway Medical Tower, Suite 502 Conf. rm
Medical/Surgical Chest Conference, each Monday, 4:00 p.m., UAMS Hospital, room M1/293
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education II Bldg., room 0131
Medicine Research Conference, one Wednesday each month, 4:30 p.m. UAMS Education II Bldg. room 0131A
Neuropathology Conference, 2nd Wednesday each month, 4:00 p.m., AR State Crime Lab, Medical Examiner's Office
Neurosurgery, Neuroradiology & Neuropathology Case Presentations, Thursdays, 4:00 p.m., UAMS Hospital OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education II Bldg., room 0141A
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Orthopaedic Basic Science Conference, Tuesdays, 7:30 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Bibliography Conference, Tuesdays, Jan. - Oct., 7:30 a.m., UAMS Education II Bldg.
Orthopaedic Fracture Conference, Tuesdays, 9:00 a.m., UAMS Education II Bldg., room B/107
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education II Bldg., room B/107
Otolaryngology Grand Rounds, 2nd Saturday each month, 9:00 a.m., UAMS Biomedical Research Bldg., room 205
Otolaryngology M&M Conference, each Monday, 5:30 p.m., UAMS Otolaryngology Conf. room
Perinatal Care Grand Rounds, every Tuesday, 12:15 p.m., BMC, 2nd floor Conf. room
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Grand Rounds, Tuesdays, 8:00 a.m., ACRC Betsy Blass Conf.
Surgery Morbidity & Mortality Conference, Tuesdays, 7:00 a.m., ACRC Betsy Blass conference room, 2nd floor
NLRVA Geriatric/Medicine Grand Rounds, Thursdays, 8:00 a.m., VAMC-NLR, Bldg 68, room 130
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E-142
VA Medical Service Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D109
VA Medicine Pathology Conference, Tuesdays, 2:00 p.m., VAMC-LR, room 2D109
VA Pathology-Hematology/Oncology-Radiology Patient Problem Conference, Thursdays, 8:15 a.m., VAMC-LR, room 2E142
VA Physical Medicine & Rehab Grand Rounds, 4th Friday each month, 11:30 a.m., VAMC-NLR, Bldg. 68
VA Topics in Physical Medicine & Rehab Seminar, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68
VA Psychiatry Difficult Case Conference, 4th Monday, 12:00 noon, VAMC-NLR, Mental Health Clinic
VA Surgery M&M Conference (Grand Rounds), Thursdays, 12:45 p.m., VAMC-LR, room 2D109
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas

Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

FORT SMITH-AHEC

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Neuroscience & Spine Conference, 3rd Wednesday each month, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Country Club
Greenleaf Hospital CME Conference, monthly, 12:00 noon, Greenleaf Hospital Conference Room. Lunch provided.
Independence County Medical Society, 2nd Tuesday, 6:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro Cardiology Conference, every other month, 7:00 p.m., alternating between Methodist Hospital Conference Room and St. Bernard's, Stroud Hall. Meal provided.
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroscience Conference, 3rd Monday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch Provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Piggott CME Conference, 3rd Thursday, 6:00 p.m., Piggott Hospital. Meal provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Cardiology Conference, dates vary, 7:00 p.m., locations vary
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Thursdays, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Wednesdays, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Tumor Conference, 4th Tuesday, 12:00 noon, Medical Center of South AR, Warner Brown Campus
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Tuesday/quarterly, 12:00 noon, St. Michael Health Care Center
Neuro-Radiology Conference, 1st Thursday every month at St. Michael Health Care Center and 3rd Thursday of ever month at Wadley Regional Medical Center, 12:00 noon.
Residency Noon Conference, Monday, Wednesday, Thursday, Friday each week, alternates between St. Michael Health Care Center & Wadley REgional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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